ERIC Document Resume	See Instruction Sheet	DATE OF RESUME 8/11/65	DATE RECEIVED

A. PUBLICATION DATA

1. ERIC NUMBER	2. ORIGINATOR CONTROL NO(S).	3. IDENTIFICATION NO.
ED000450	7202	N.A.

DO NOT WRITE IN SPACE BELOW

4. AUTHOR(S):
MacNaughton, Malcolm, chairman

5. TITLE OF DOCUMENT ABSTRACTED:
Education Beyond the High School in Hawaii, 1958-1968

6. PUBLICATION TITLE:
N.A.

7. EDITOR(S):
N.A.

8. PLACE OF ORIGIN
ORG. Chaminade College of Honolulu
ST. 3140 Waialae Avenue
CITY. Honolulu, Hawaii
TELE. EXT.
INST/LOC CODE

9. PUBLISHER OR SOURCE
Chaminade College of Honolulu

10. VOL.	11. PAGES	12. MO./YR.	13. TOTAL PP.
N.A.	N.A.	59	41

MICROFILM COPY AVAILABLE
YES ☒ NO ☐

COPYRIGHT GRANTED
YES ☐ NO ☒

COPYRIGHT RELEASE FILED
YES ☐ NO ☐

TYPE OF REPORT
PROPOSAL ☐
IN-PROGRESS ☐
FINAL ☒
FOLLOW-UP ☐

OTHER ERIC REFERENCES:

ERIC SATELLITE CODE

B. INDEXING DATA

14. SUBJECT AREA

15. TYPE OF ENDEAVOR
report

16. INDEXING TERMS (6-12)

planning	enrollment	finances		
measurement	faculty	income		
occupations	buildings and equipment	needs		

17. ABSTRACT (MAX. 250 WORDS)

Measures requirements for an adequate program of higher education in Hawaii from 1958 through 1968. Projections cover occupational trends, enrollments, faculty, building needs, and public funds requirements. Analyzes sources of income. Presents numerous graphs.

ERIC No.

18. SOURCE OF ABSTRACT

C. FUNDING DATA

19. SUPPORTING ORGANIZATION	20. DIVISION OR DEPT.	21. CONTRACT NO. / PROJECT NO.
	22. TOTAL COST OF PROJECT	
	23. DURATION OR PROJECT	U.S. Department of Health, Education, and Welfare Office of Education

ERIC Form 1

IV-19

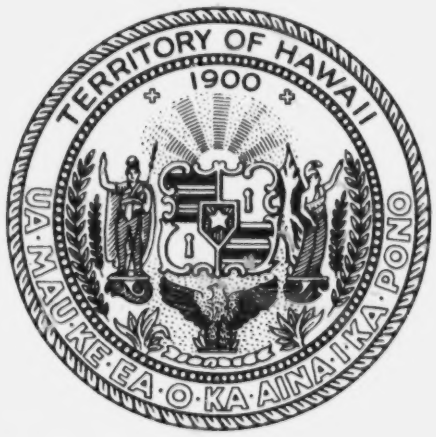
U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated do not necessarily represent official Office of Education position or policy.

EDUCATION BEYOND THE HIGH SCHOOL IN HAWAII

1958-1968

A Preliminary Survey Designed to Measure the
Practical Requirements for an Adequate Program
During the Next Decade



A Report of
The Governor's Committee on Education Beyond the High School
Honolulu, Hawaii
January 1959

IV-20 Chaminade College of Honolulu

7/11/60 ED000450

THE GOVERNOR'S COMMITTEE ON EDUCATION BEYOND THE HIGH SCHOOL

Malcolm MacNaughton, Chairman
Executive Vice President
Castle and Cooke, Inc.

James Shoemaker, Vice Chairman
Vice President, Director of Research
Bank of Hawaii

Frank J. Drees
Director, Adult Education
Department of Public Instruction

John Payne
Principal Technologist
Hawaiian Sugar Planters' Association
Experiment Station

Marion Sexton
Publisher, *Windward Oahu Reporter*

Willard Wilson
Provost and Vice President
University of Hawaii

Ralph T. Yamaguchi
Attorney at Law

• • • •

Mrs. Karol van der Veur
Research Coordinator

LETTER OF TRANSMITTAL

January 1959

The Honorable William F. Quinn
Governor of Hawaii
Iolani Palace
Honolulu 13, Hawaii

Dear Governor Quinn:

At your request, we have made an appraisal of the practical requirements for an adequate program of education beyond the high school during the next decade.

The Committee was formed in February and completed its work in August of 1958. Hence it was necessary to assemble and analyze information already developed by various agencies for their own purposes since neither the resources nor the time were available to undertake completely new research projects. As far as we know, this is the only attempt to make a survey of educational needs beyond the high school on an all-island basis.

In carrying out its assignment, your Committee has not presumed to formulate decisions that educators, government officials or legislators should make—instead, it has endeavored to provide the information necessary for making such decisions. This is an essential first step, but first step only, in meeting the need for orderly action in the planned development of staff and facilities. We believe, however, that this is a reasonably good beginning. Not all of the report is easy reading, and the implications of much of it are far-reaching. The Committee, however, believes that it is essential to the welfare of the Territory of Hawaii that we be thoroughly informed, basing our planning on that information.

We have made full use of information and assistance from the Department of Public Instruction, the University of Hawaii, Territorial colleges and technical schools, the Committee on the Guidance and Employment of Youth, and the Territorial Department of Labor. In addition, government officials, community organizations, and individuals have directly assisted us in many ways. Special credit is due to Mrs. Karol van der Veur, research coordinator, who assembled and analyzed basic data.

Without such cooperation, the report would not have been possible. Hence this letter carries our acknowledgement and appreciation to them for their generous cooperation.

Respectfully submitted,

MALCOLM MACNAUGHTON, *Chairman*

Origin and Purpose of This Report

In his message to Congress on the state of the Union in 1956, President Eisenhower stated that a marked increase was to be expected in the need for higher education in the United States and that he was appointing a "Commission on Education Beyond the High School."

In a similar message in January 1957, he stated that the Commission had reported to him that the most urgent requirement was for "planning on the state level."

To this end the President called a series of regional state conferences. The first of these (held in San Francisco in April 1957) included the western states, Alaska and Hawaii. The delegates from Hawaii were Mr. Frank Drees, of the Department of Public Instruction; Mr. Harold W. Kent, Director of Kamehameha School; Mr. James H. Shoemaker, of Bank of Hawaii; and Dr. Willard Wilson, Acting President of the University of Hawaii. Also attending unofficially were President Reuben Law, of the Church College of Hawaii, and the former Dean of Chaminade College, Father McCluskey. Based on their report and recommendations, Governor Quinn created the Governor's Committee on Education Beyond the High School to conduct the study embodied in this report. Its purpose is to inform the people of the Territory concerning the prospective requirements for education beyond the high school if the needs of the young people now in our public schools are to be met.

This report is thus not a single isolated effort, but it is rather a part of the broad movement designed to meet prospective needs throughout the nation. Practically every state is conducting a similar study.

As a regional coordinating agency for this general movement, the western states several years ago created the "Western Interstate Commission on Higher Education." Hawaii has been included on an informal basis in its deliberations and has been invited to become a member.

Why Hawaii Should Support a Strong Program for Education Beyond the High School

The material and cultural level at which any community lives is dependent upon the level of education, training and ability in the community as related to its physical resources. In the long run, the factor which determines this level is the quantity and quality of education.

Education beyond the high school focuses on two objectives (1) the training of students and (2) the advancement of knowledge.

It attempts to give each student four things: (a) a broad foundation in basic fields and ethical standards; (b) ability to organize his thoughts logically and reach valid conclusions; (c) ability to communicate clearly with others; and (d) specialization in the field of his choice. It endeavors to provide adults with supplementary training from time to time for advancement and for adjustment to technical changes.

The advancement of knowledge is dependent on the effort of scholars and specialists working together. Original research of this sort is a part of education beyond the high school, not only because of what it will contribute to advancement in Hawaii, but because it adds life and meaning to the entire education process, firing the interest, imagination and ambition of students. Education thus creates values that can never be measured in dollars and cents.

Even ignoring such values, the cost of education beyond the high school is justified on a monetary basis in terms of the leadership, the improvement in efficiency, and the expansion in new forms of production, income, and employment which increased use of one's intelligence will create. It is readily demonstrable that the cost of a fully adequate program for education beyond the high school in Hawaii will more than pay for itself in material returns—both to the individual and to the Territory of Hawaii that in large part finances it.

Contents

Summary of Findings 5

The Prospective Demand for Education Beyond the High School in Hawaii 10

Prospective Needs of Institutions for Education Beyond the High School in the Territory of Hawaii Over the Next Decade 17

Total Projected Cost of Education Beyond the High School in Public Funds — 1958-1968 31

Summary of Findings

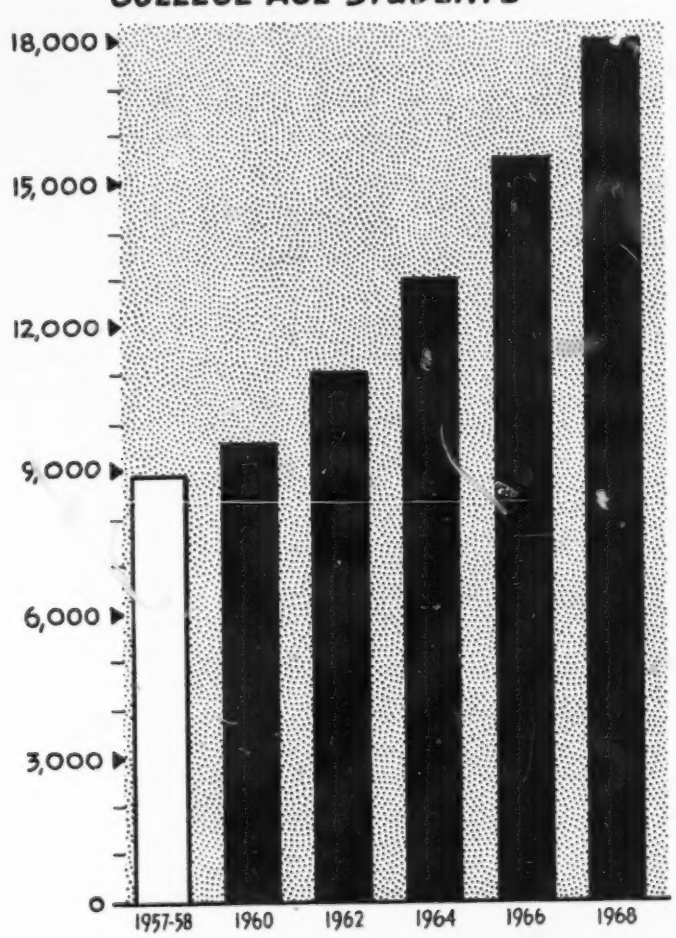
Two basic facts become clear in attempting to survey the needs of education beyond the high school in the Territory of Hawaii over the next decade. First, the number of college age (18-24 year old) youths in the Territory annually engaged in education beyond the high school will increase tremendously. A conservative estimate anticipates twice as many youths of this age group undertaking an education beyond the high school in 1968 as today.

Second, the provision of adequate further education for the increased numbers seeking it will necessitate a significant increase in public and private income devoted to education beyond the high school.

PROJECTIONS – EDUCATION BEYOND THE HIGH SCHOOL 1958-1968

GRAPH -1-

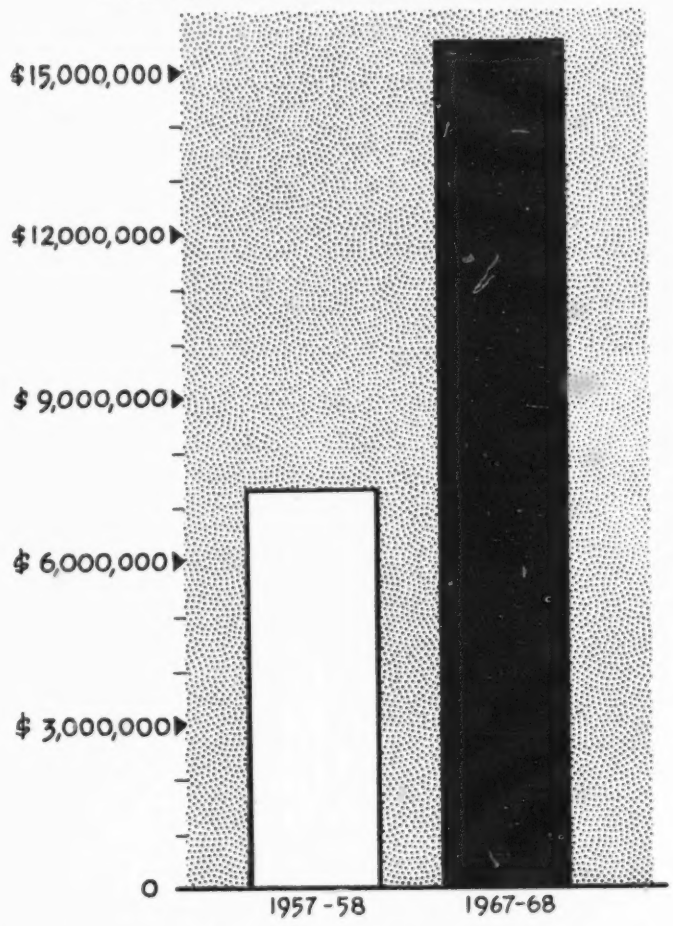
COLLEGE-AGE STUDENTS*



*Total 18-24 year olds in Territory in full time education beyond high school. Excludes evening technical and adult education classes.

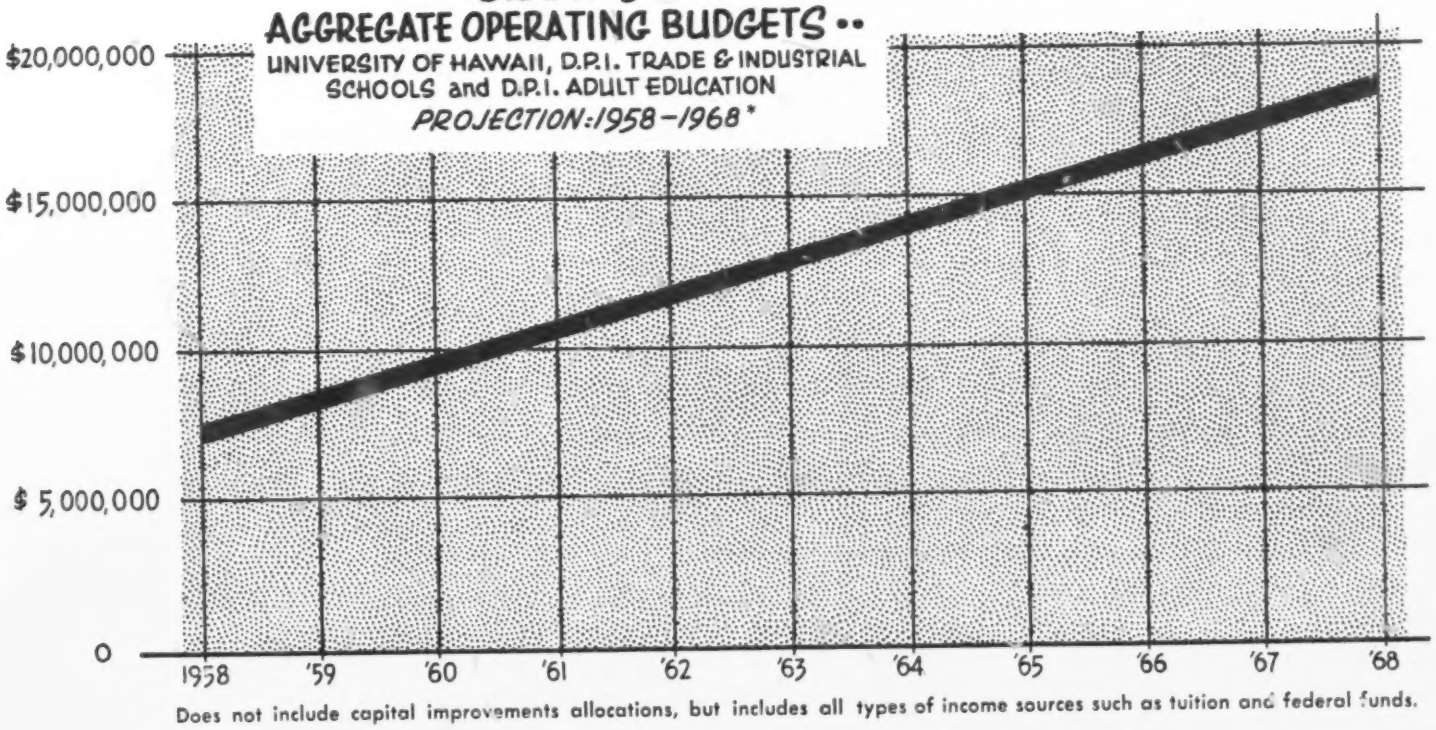
GRAPH -2-

PUBLIC FUNDS REQUIRED*



*Public Territorial funds for University of Hawaii, DPI Trade and Industrial Schools and DPI Adult Education Program only. Includes average yearly allocation for capital improvements; Excludes private school and college needs.

GRAPH -3-



Does not include capital improvements allocations, but includes all types of income sources such as tuition and federal funds.

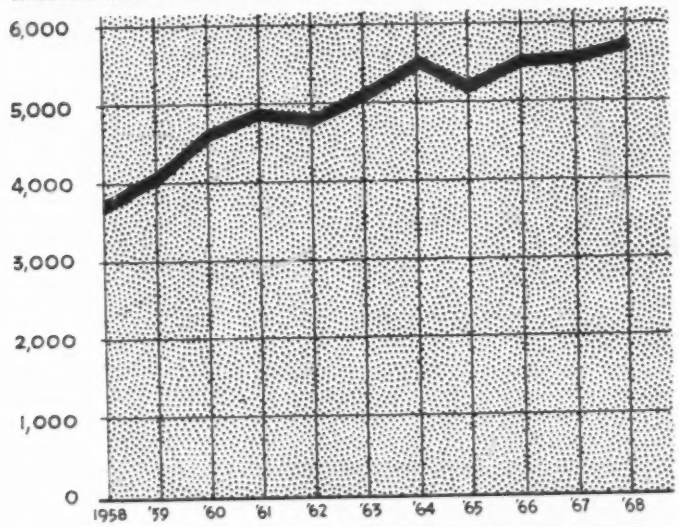
The present opportunities for education beyond the high school in the Territory which are supported by public funds include the University of Hawaii, the trade and industrial schools of the DPI (Department of Public Instruction), and the adult education program of the DPI. A reasonable estimate of funds needed for adequate extension of the physical facilities, staff and operating budgets of these institutions is $22,000,000 annually by 1968. Of this total, approximately $15,390,000 will have to be allocated public Territorial funds.

Substantiating the expected increase in the number of college age (18-24 year old) youth engaging in full-time education beyond the high school over the next ten years is the predicted increase in the size of the 18-24 year old group in the Territory and the number of high school grad-

PROJECTED INCREASES • 1958-1968

GRAPH -4-

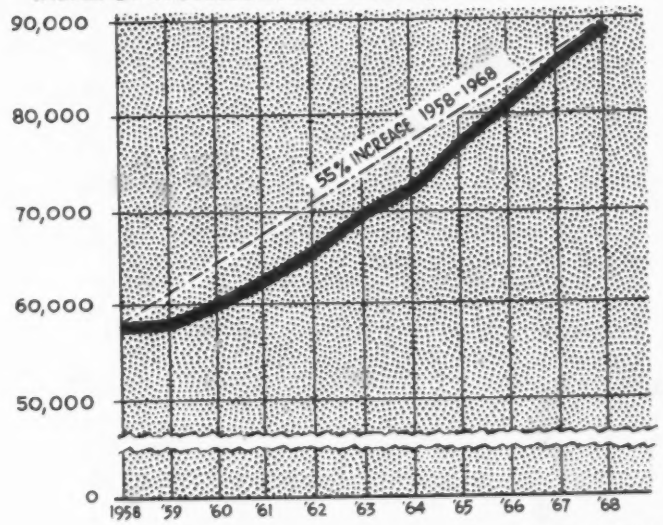
HIGH SCHOOL GRADUATES WHO WILL SEEK FURTHER EDUCATION



based on Bachman Plan (U.H.) and data from Joint Committee for the Employment and Guidance of Youth

GRAPH -5-

INCREASE IN COLLEGE-AGE GROUP (18-24 YR OLDS)



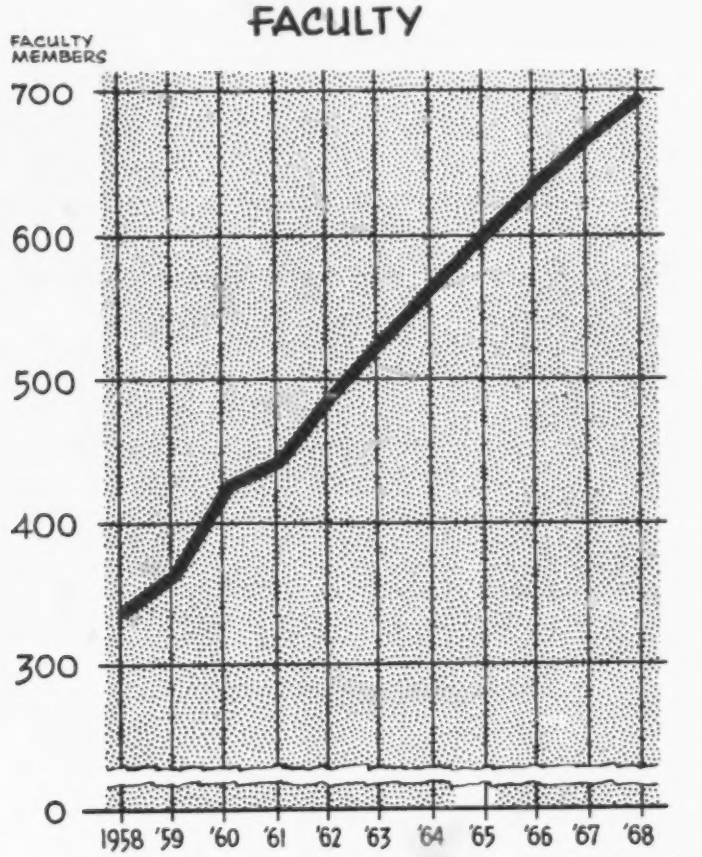
Source: T.H. Dept of Health

uates annually seeking education beyond the high school. The 18-24 year old age groups of the next 10 years have already been born and can be tallied accurately. In addition to an increase in number, it is expected that the total percentage of this group which will seek an education beyond the high school will show a minimal .05 percent yearly increase. The percentage of each annual group of high school graduates which will seek an education beyond the high school is expected to continue at at least the present rate.*

At the University of Hawaii alone, the expected increase in enrollment will require an accompanying increase of nearly 100 percent (340) in faculty if the present student-faculty ratio is to be maintained (Graph 6). Enlarged facilities will be required to adequately accommodate the larger number of students. The estimated increase in square footage of instructional area alone needed at the University of Hawaii is illustrated by graph 7.

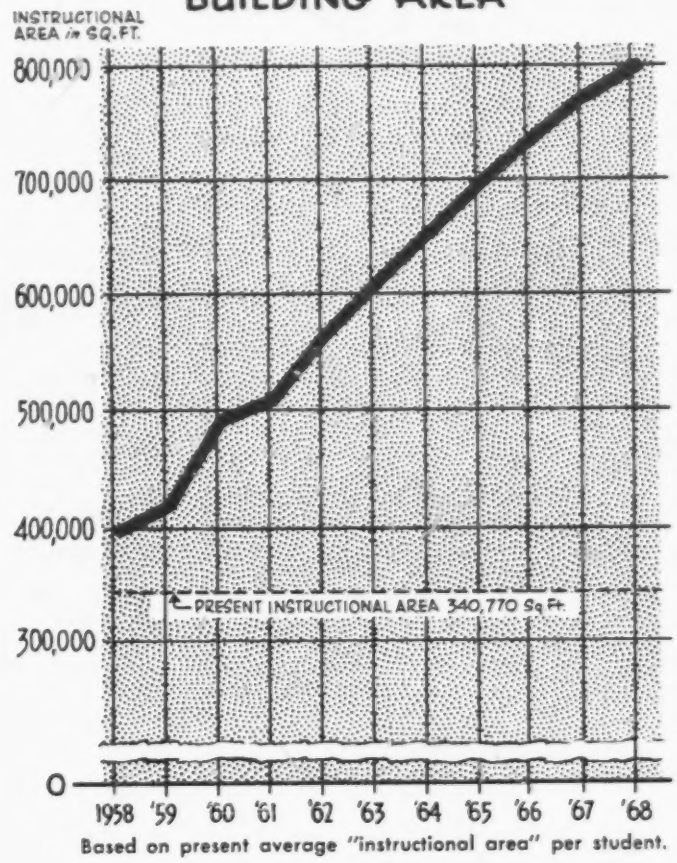
PROJECTED REQUIREMENTS • UNIVERSITY OF HAWAII

GRAPH -6-
FACULTY



Based on current student-faculty ratio.

GRAPH -7-
BUILDING AREA



Based on present average "instructional area" per student.

Increased staffs and facilities will necessitate increased budgets. The anticipated budgetary increases required by the University of Hawaii and the DPI Trade and Industrial Schools and Adult Education Program, exclusive of capital improvements, but including all sources of income such as Legislative appropriations, tuition and federal funds, are illustrated in graph 3. These estimates allow for substantial (100 percent over a decade) faculty salary increases. Almost without exception the many national and state studies of education beyond the high school have concluded that unless college faculty salaries are doubled by 1970 there will be a grave shortage of college faculty and the caliber of college teaching will experience severe deterioration.

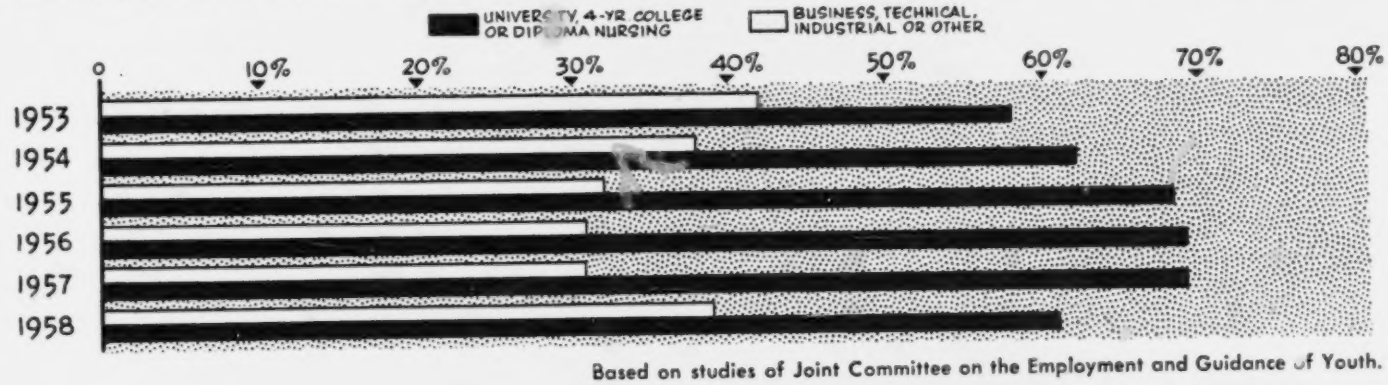
*A distinction is made here between an annual group of high school graduates and the total group of 18-24 year old youths in the same year.

Summary of Findings

Enrollments in the various kinds of education beyond the high school are expected to follow the current enrollment pattern. On the average, two-thirds of the high school graduates desiring further education indicate plans to attend a University, a four-year college or a diploma nursing school. The other one-third seek business, technical or industrial training.

GRAPH -8-

EDUCATIONAL PLANS OF HIGH SCHOOL GRADUATES WHO CONTINUED THEIR SCHOOLING

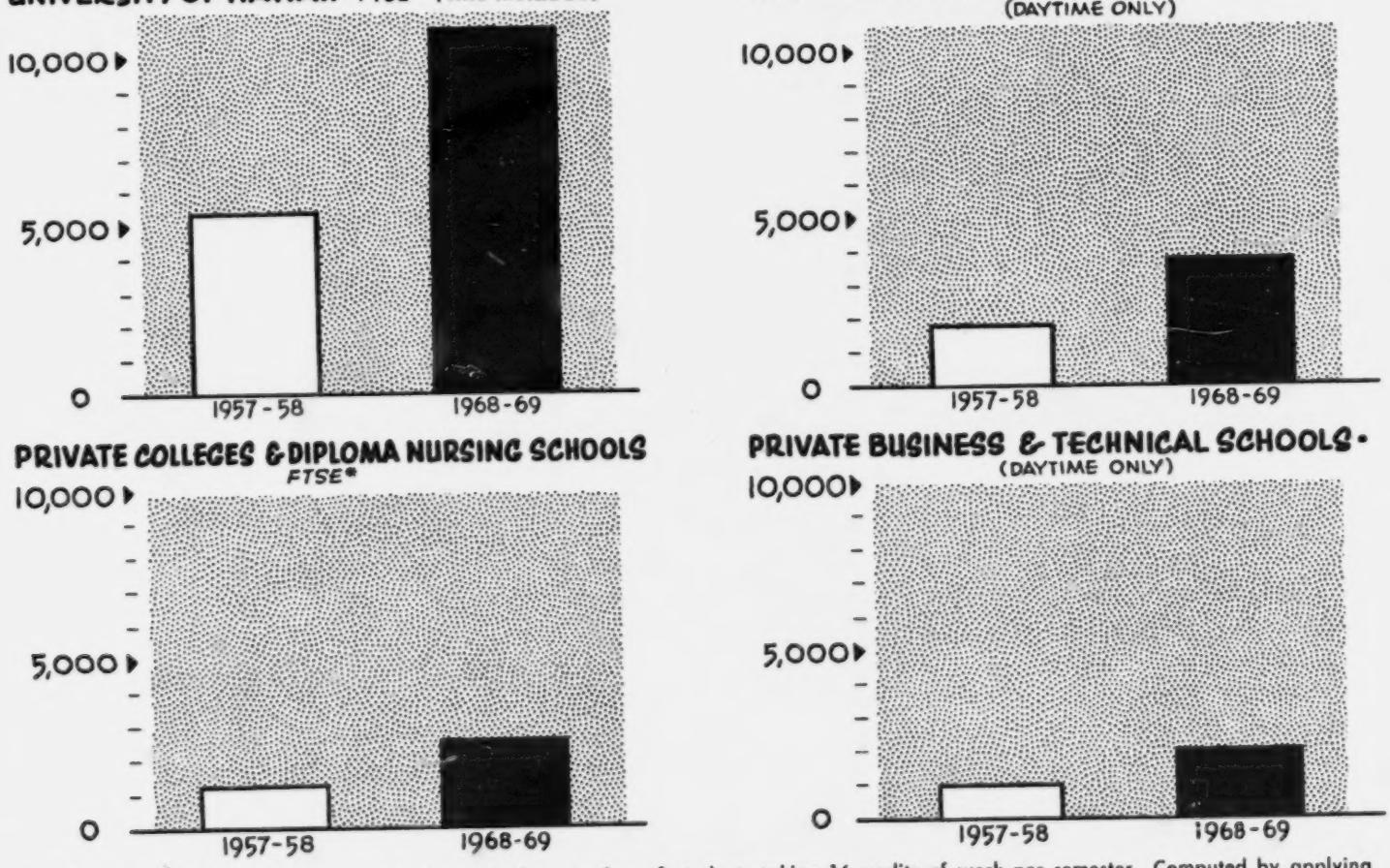


Based on studies of Joint Committee on the Employment and Guidance of Youth.

It is expected that the increase in the number of 18-24 year olds engaged in education beyond the high school by 1968 in the Territory of Hawaii will be reflected in all the existing types of education beyond the high school.

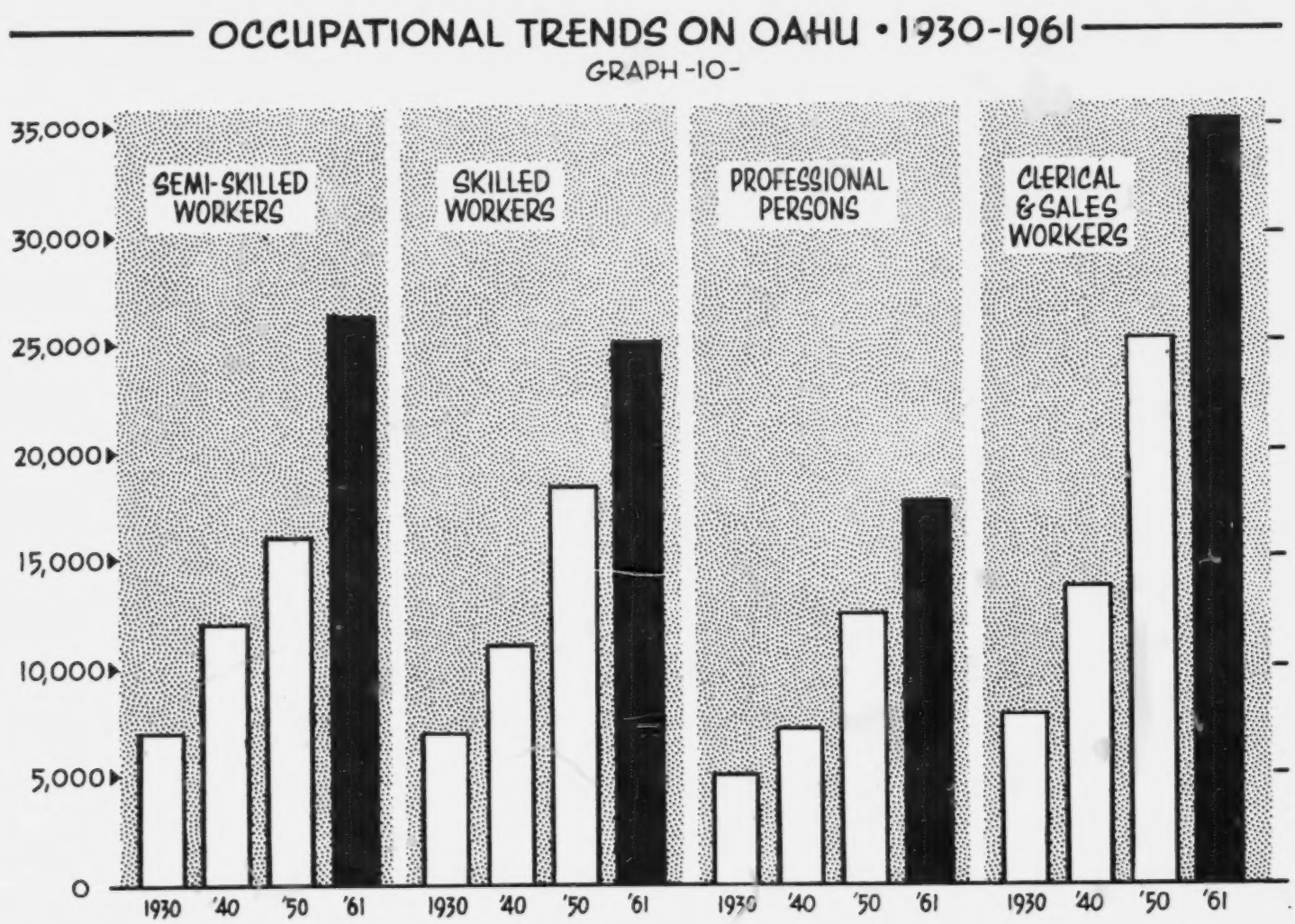
GRAPH -9-

PROJECTED ENROLLMENTS



*Full time student equivalent represents the equivalent number of students taking 16 credits of work per semester. Computed by applying average ratio FTSE/Average to average figure each year. Graphs based on current enrollments in the Territory, ½ of one percent increase in annual number seeking education beyond the high school, and estimated size of the 18-24 yr. age group in 1957-58 and 1968-69.

The Territory of Hawaii will need the increased number of trained personnel. The Territory is growing — in population, in economic activity and in per capita wealth. With this growth, its need for professional and technically trained workers and skilled labor is increasing. The Territorial Department of Labor has predicted continued increase in these needs as illustrated in graph 10. On the Island of Oahu* shortages already exist in the supply of engineers, teachers, teachers' aides, electronic technicians and highly qualified stenographers.



Source: "Oahu Looks Forward to 1961" by Staff Services Div., Bureau of Employment Security, T.H. Dept. of Labor & Industrial Relations

Of equal importance with the professional and technically trained person, will be a sufficient number of residents in the Territory with a high level education who can undertake the social, physical and biological scientific research becoming increasingly important to the welfare of a community. It is not realistic to expect the bulk of such research to be carried on by imported scholars. The cultural and intellectual development of the Territory will not keep pace with its economic development unless the value of education for these ends is recognized and supported.

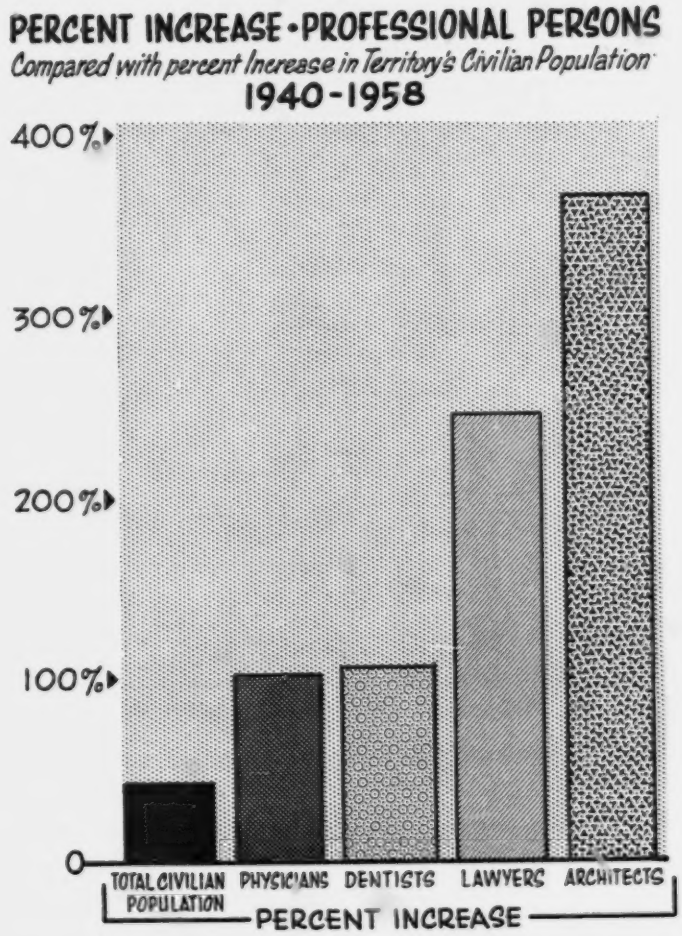
*Oahu accounts for over ¾ths of the Territory's population.

The Prospective Demand for Education Beyond the High School in Hawaii

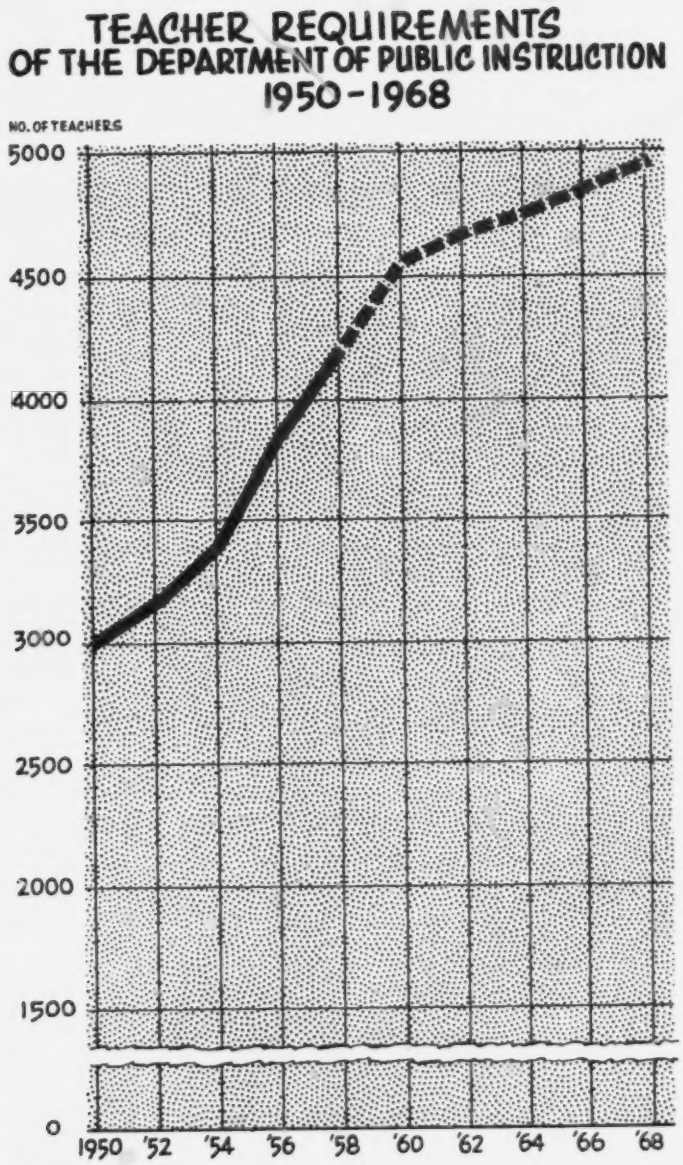
The demand for education beyond the high school has two aspects—(1) the need of the community for trained personnel and (2) the number of individuals seeking training.

The Prospective Need for Trained Personnel

The demand in the Territory of Hawaii for personnel trained beyond the high school will increase substantially over the next decade. In recent years the growth of defense activities, tourist trade, new industries and the importance of water and air transportation has had a significant impact on the occupational pattern of the Islands. trained personnel, skilled and semi-skilled labor The demand for professional and technically and clerical and sales workers has been indicated. The graph at right illustrates the increase in demand for professional persons in particular. The demand for farm labor, on the other hand, has steadily declined and that for unskilled labor has remained somewhat static. Seventy-five percent of Oahu's workers are now employed in various service industries, trade, transportation and government. Furthermore, a shortage of trained personnel in some occupations actually exists in the Territory today. The estimated continuing increase in need for teachers by the DPI for 1958-1968 is shown in the graph on the opposite page. Due in part to competitively low salaries, the shortages in these fields also reflect an insufficient number of persons trained in the Territory.



The 1958 report of the Territorial Department of Labor and Industrial Relations, Bureau of Employment Security, Staff Services Division entitled: **Oahu Looks Forward to 1961** predicts a continued increase in the demand for trained personnel. Although limited to Oahu, the report provides some sound indications of the total Territorial employment picture since Oahu has over three-fourths of the total population and represents most of the retail trade, wholesale trade, tourist trade and business connected with defense and overseas shipping and airlines. We may expect these demands for trained personnel to continue



Source: T.H. Dept. of Public Instruction

to increase over the next decade. Most of the professional, technical and skilled labor employment opportunities require an education of some sort beyond the high school. The increasing demand in these areas is significant, therefore, for any survey of education beyond the high school.

Prospective Increase in the Numbers to be Educated Beyond the High School

Meeting the rapidly growing demands for education beyond the high school is probably one of the most critical of the many challenges facing the United States today. The challenge is fully as acute for the Territory of Hawaii. The anticipated need for more trained personnel has been indicated. The demand of an increasing number of persons for education beyond the high school is equally compelling.

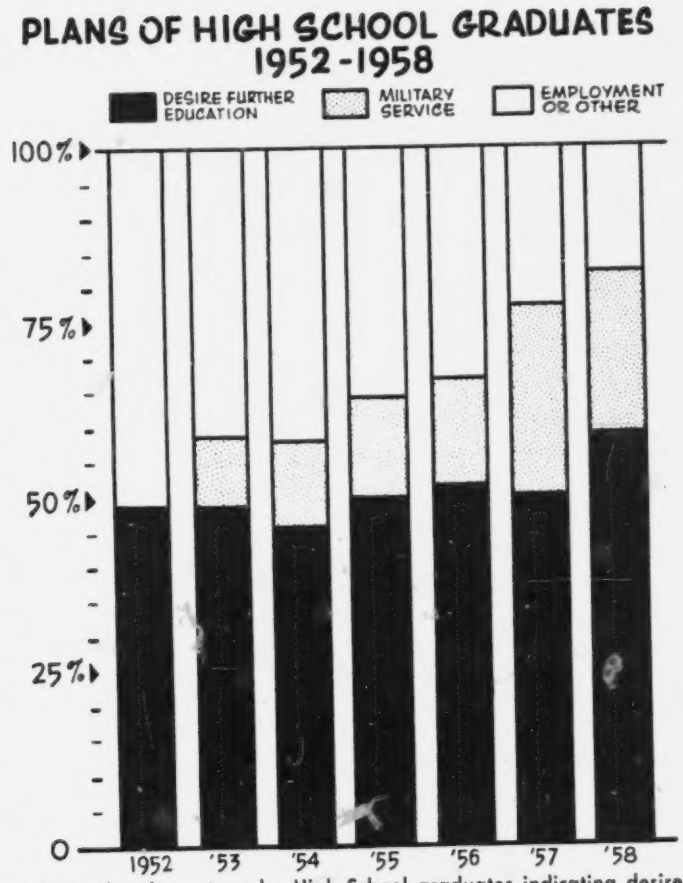
The population of the Islands is growing very rapidly. In July, 1954 the population of the Territory was 480,000; it was 570,000 in January, 1958. The Territory's population has, in fact, increased at a faster rate than that of the total United States. Similarly, the Islands' birth rate is higher than for the United States as a whole. The increased birth rates of the 1940's and early 1950's are now resulting in an explosive increase in the college, or 18-24 year old, age group. On the basis of known births and mortality rates for the Territory of Hawaii the 18-24 year old age group will be 55 percent larger in 1968 than it is in 1958.

On the basis of these facts and assuming a balance of in and out migrations*, we may expect to continue to grow at a rate at least comparable with the United States at large. We may expect, too, that the expansion in the relative size of the 18-24 year old age group in the Territory will at least parallel, if not exceed that of the United States as a whole. It is also clear that the increase will not hit as a wave and subside as did the wave of post-war veterans. It is rather a surge that will not recede. We shall continue to have an expanded 18-24 year old age group in institutions of education beyond the high school.

Demand by High School Graduates

Although it is difficult to predict precisely the demand for education beyond the high school in the Territory for the decade 1958-1968, reasonable estimates, based on presently known facts, are of value in planning to meet the challenge. They, indeed, seem essential. Over the past seven years a Joint Committee on Guidance and Employment of Youth in the Territory has conducted a survey of high school graduates. Their findings indicate that, on the average, 50 percent of the Territory's high school graduates have planned to undertake education beyond the high school. The graph at top of page 12 indicates the yearly percentages from 1952 through 1958. The average yearly increase in the percentage of high school graduates

*The excess of in-migrants since July, 1954, has been largely attributed to military dependents and is not expected to continue.

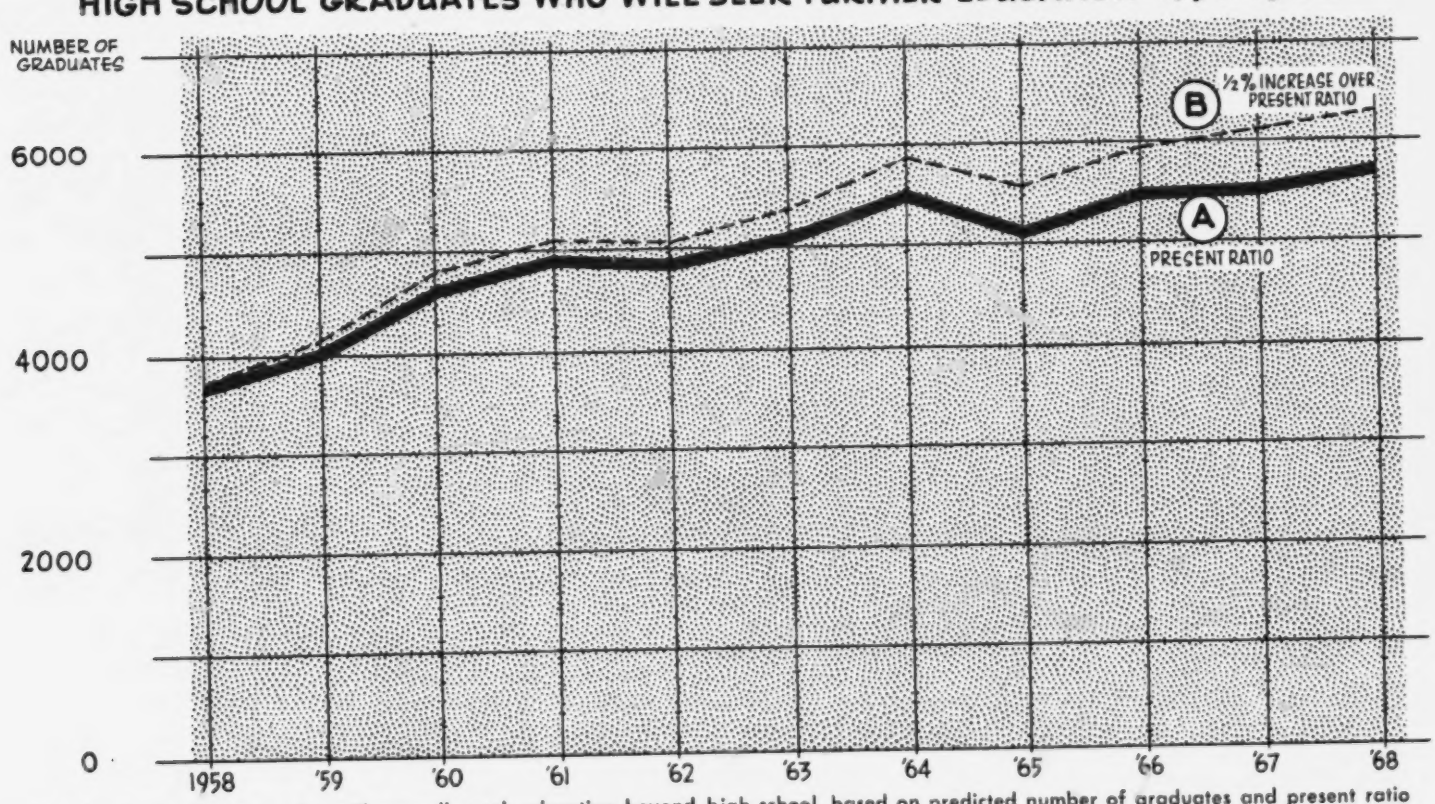


Increasing percentage by High School graduates indicating desire for education beyond high school; data from Joint Committee on Employment and Guidance of Youth Studies, 1952-1958.

who plan education beyond the high school since 1954, however, has been 3½ percent. During this period the number of high school graduates included in the studies rose from 6,000 in 1952 to 6,800 in 1957.

If the above mentioned rate of 50 percent remains constant, there will be approximately 5,750 high school graduates annually seeking an education beyond the high school by 1968. This figure is based on the estimated number of high school graduates for 1958-1968 which are indicated by known birth statistics. It is an increase of 68 percent over the 3,400 high school graduates in 1957 who desired an education beyond the high school. Line "A" of graph below shows what this increase will be by years. This is a conservative estimate. Line "B" indicates what the yearly number and increase will be if the number of high school graduates planning an education beyond the high school increases by ½ of one percent annually. Past trends would indicate that this is a reasonable estimate.

Statistical evidence for the United States reveals that there has been a steady increase in the proportion of the college age group which



Number in the Territory who will annually seek education beyond high school, based on predicted number of graduates and present ratio seeking such education.

seeks an education after high school. As a result —even with the present college age group just beginning to rise from its lowest point in 25 years due to the depression slump in births—college and university enrollments are at an all-time high. This appears to be the case also in the Territory of Hawaii where the University of Hawaii's enrollment has steadily increased since 1951-1952, without a comparable increase in the number of people of college age.

Although the Joint Committee on Guidance and Employment of Youth does not indicate any marked increase in the percentage of high school seniors in the Territory immediately seeking education beyond the high school, the graph, top of page 12 demonstrates that the number who have selected military service has increased sharply. Of the all-time high of 27 percent of the high school graduates selecting military service in 1957, 38 percent indicated plans for further education. This would tend to support the Line "B" estimate of the graph at bottom of page 12 based on a small, regular increase in the percentage of the 18-24 year olds each year in enrollments of institutions of education beyond the high school.

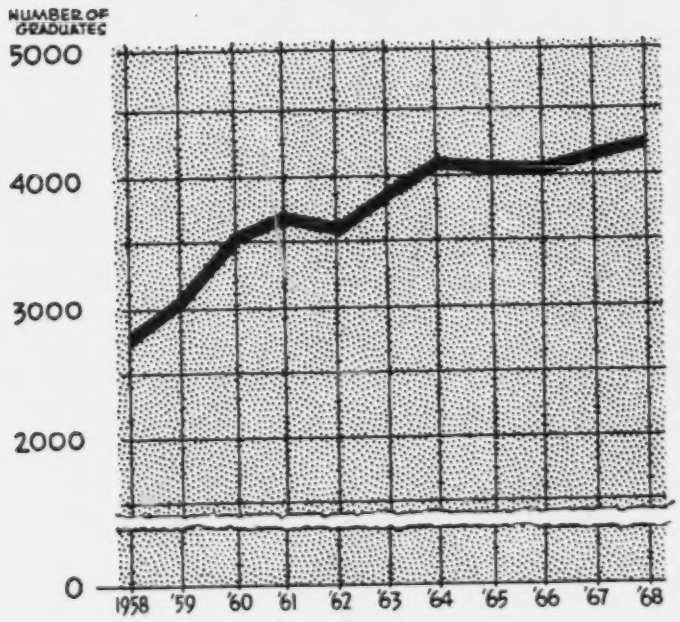
Kind of Education Sought and Where

At least 5,800 high school graduates annually will seek an education beyond the high school in 1968. It is appropriate then to ask what kind of education they will seek and where they will seek it.

Over its seven years of study, the Joint Committee on Guidance and Employment of Youth has found that of those high school graduates planning to seek education beyond the high school, an average of nearly two-thirds each year plan to attend a university, a four-year college or a diploma school of nursing. On the average, about 28 percent plan to attend a business school, technical or trade school and nearly 7 percent a practical nursing school, junior college or other type of educational institution. Graph No. 8, page 8 portrays the increase in the percentage seeking a college or university training in the 1953-1958 period.

As indicated in the graph (below, right) the percentage of high school graduates who plan to seek their education on the mainland, in preference to the Territory of Hawaii, has averaged 25 percent over the last seven years. Assuming a

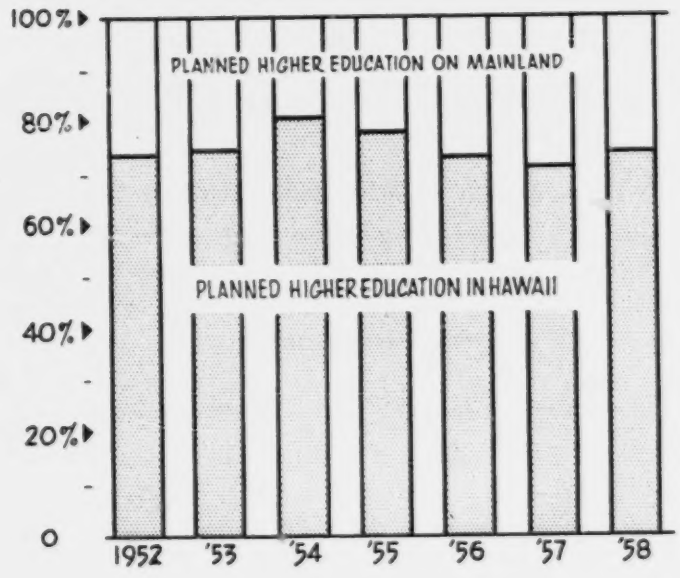
PROJECTION OF HIGH SCHOOL GRADUATES WHO WILL SEEK FURTHER EDUCATION IN THE TERRITORY
1958-1968



Assumptions: 50% of graduates will seek further education; three-quarters of these will seek it in the Territory.

Source: Bachman Plan (U.H.)

WHERE HAWAII'S HIGH SCHOOL GRADUATES PLANNED TO TAKE FURTHER EDUCATION
1952-1958

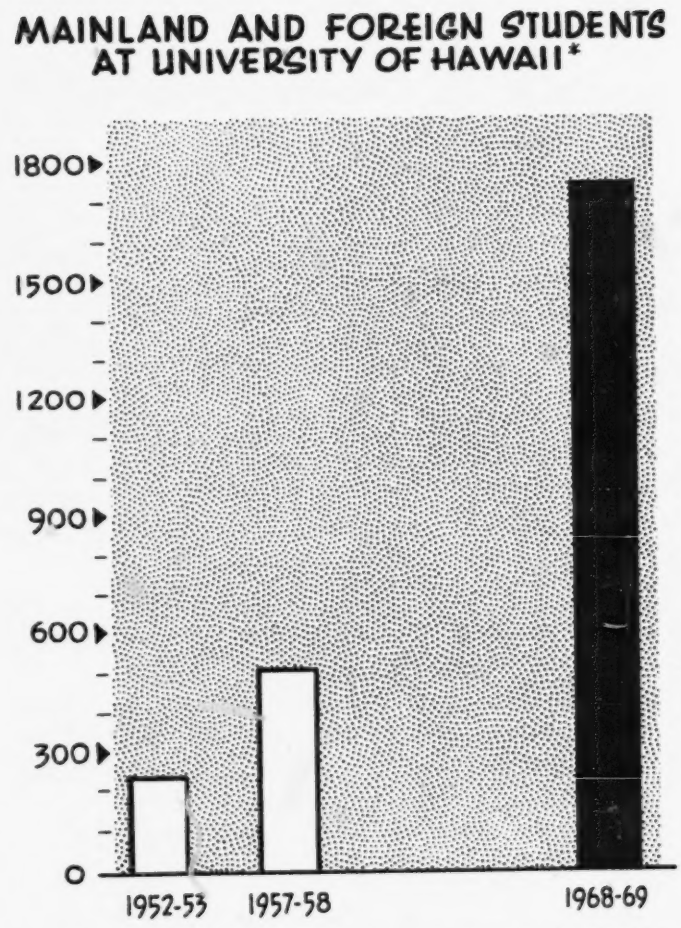


Based on plans of high school graduates included in studies of the Joint Committee on the Employment and Guidance of Youth.

Source: D.P.I. and T.H. Dept. of Labor

continuance of this practice the lower graph on page 12 indicates that by 1968 an estimated 4,300 of the 5,750 high school graduates annually seeking further education will do so here in the Territory. This estimate assumes that the percentage of high school graduates seeking further education will remain at approximately 50 percent of the total number of graduates, and that only 75 percent of this number will remain in the Islands. It assumes that 29 percent of the graduates seeking further education will be successful in gaining admission to Mainland schools, despite over-crowded conditions in Mainland schools and increasing discrimination by states with regard to non-residents. The assumption is based on the belief that, although the major Mainland schools will be crowded, there will be a sufficient number of small schools now operating at less than capacity which will accept out-of-state students.

The estimate of the number who will seek further education in the Territory also does not allow for an increase in the proportion of high school graduates seeking education beyond the high school. At the same time it also does not consider the increase in number of Mainland and foreign students coming to Hawaii for study. As indicated in the graph at right for example, the number of Mainland students attending the University of Hawaii between 1952-53 and the fall of 1957 increased from 241 to 506, or an increase of over 105 percent in five years.



*Excludes Summer School students from outside the Territory (presently more than 1,000).

Effect on Total Enrollments of Institutions for Education Beyond the High School

The crucial question with regard to the above data on numbers of high school graduates, the kind of education they seek and where they seek it, is the effect it will all have on the total enrollment of our educational institutions.

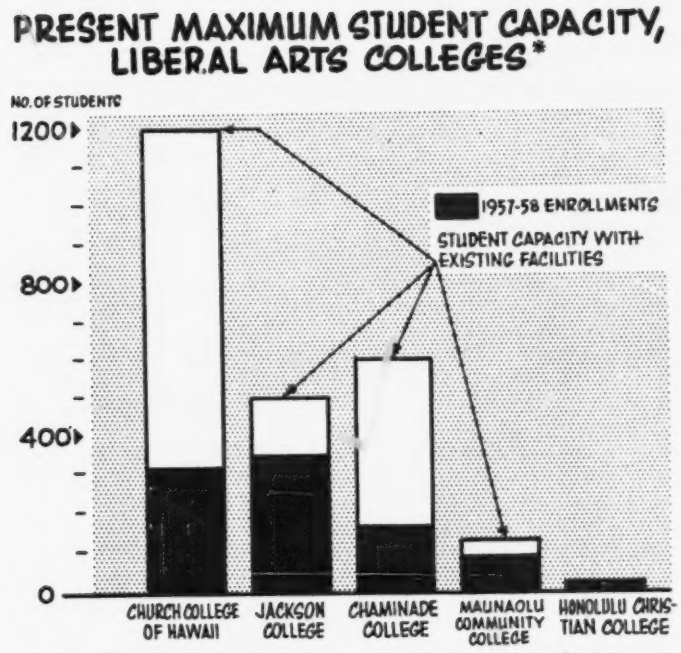
The University of Hawaii Enrollment

The University of Hawaii has estimated that by 1968 it will have a FTSE (full-time student equivalent)* enrollment of 10,436, excluding summer school, evening classes of the College of General Studies, and the Hilo branch.† This is an increase of nearly 107 percent over the present figures. It is not an excessive estimate. It assumes, moreover, that the percentage of private high school graduates who will attend the University of Hawaii will level off at 30 percent by 1964 and that of the public high school graduates at 30 percent by 1967. For the United States as a whole, an increase of 100 percent is predicted in college and university enrollment by 1970.

Circumstances in the Territory of Hawaii do not indicate that it should expect any less sizable growth than the Mainland in its number of college students. In fact, a faster population growth-rate and a higher percentage of high school graduates seem to point to an even sharper increase. Furthermore, as the only university in the Territory, the enrollment at the University of Hawaii conceivably may increase more rapidly than anticipated.

*The equivalent number of students taking 16 credits of work per semester. Computed by applying average ratio FTSE/Avg. to Average figure each year.

†With the Hilo branch and the College of General Studies enrollment included, the number might reach 11,700.



*Exclusive of University of Hawaii. Based on present facilities as stated officially by each school shown.

The Liberal Art College Enrollments

The combined FTSE enrollment of the three private liberal arts colleges and two private liberal arts junior colleges of the Territory in 1957-1958 was 981*. This does not constitute a very high percentage (17 percent) of the present college population in the Islands. Nationally, in 1957, 42 percent of the college population was in private institutions. All of the Territory's private colleges, however, are relatively new, the oldest having been established as recently as 1948. One college has become a four-year institution within the past year. Another anticipates expansion into a four-year institution in the near future. Two of the colleges have had substantial increases in enrollment in their few years of existence. It is difficult, therefore, to anticipate their future enrollments.

With the exception of one college which owns no physical plant at the present time, all have facilities for accommodating a larger number of students than are presently enrolled. The graph above illustrates the enrollment growth capacity for these colleges. Two of the colleges have strong church support and probably will find it possible to expand their facilities if necessary to accommodate increased enrollments. It does seem justified to predict that the combined enrollments of these colleges will reach at least 2,000 by 1968. A projection based on current enrollments, the estimated college age group for 1968 and ½ of one percent yearly increase in the number seeking education beyond the high school places the number at 2,260.

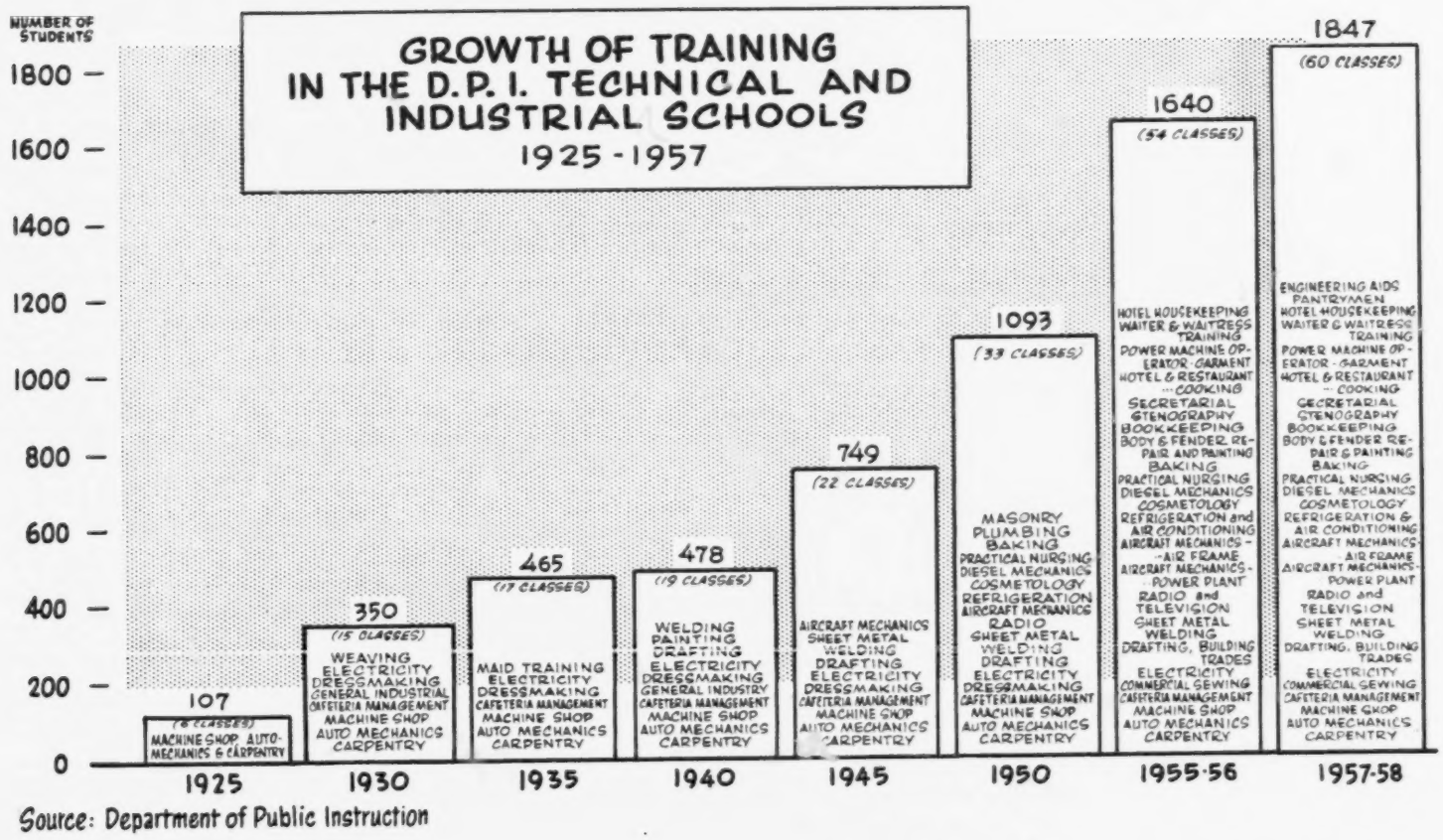
*Jackson College reports a 404 FTSE enrollment consisting of a day program enrollment of 86 and an evening enrollment of 318.

Business, Technical and Industrial School Enrollments

The numbers seeking other types of education beyond the high school is expected to increase at least proportionately to that of the colleges and University. About 31 percent of the total full-time day student population of institutions training beyond the high school today is found in the technical, business and other non-college institutions. And, at the present time, about one-third of our high school graduates who aim at further education plan to take this type of training.

Predicting on this basis, the number of high school graduates annually seeking technical, industrial, business and other non-collegiate types of training by 1968 will be 2,000 (a nearly 53 percent increase), and the total enrollments approximately 5,840. The cumulative total daytime enrollment in the DPI's 60 technical and industrial training classes for the school year 1957-58 was 1,847, of whom 1,163 were high school graduates. The growth which has taken place in number and total (day and evening class) enrollment of the technical classes is demonstrated in the graph on next page. Annual daytime enrollments totalling 3,700 may reasonably be expected in the DPI trade and industrial schools by 1968.

The current full-time day student enrollment of our private business colleges, technical and industrial schools, art school, beauty and barber schools totals approximately 1,037. The evening classes accommodate an additional 683 students. Combining public and private business, technical and industrial, art, beauty and barber schools, in addition to the schools of nursing, a total day-time enrollment of 3,085 is reached. With evening classes the total is 7,526. Growth is at a rate comparable with the other forms of training beyond the high school would bring the business, technical and industrial, art, beauty, barber and nursing school total to an annual day-time enrollment of approximately 6,000 by 1968.



Source: Department of Public Instruction

In the neighborhood of 15 percent (excluding evening classes) of our present college-age group (18-24) are enrolled in education beyond the high school in the Territory in 1958. On the basis of the projected enrollments for 1968 approximately 20 percent of this age group will be enrolled in education beyond the high school in the Territory. This represents only ½ of one percent increase per year. The increase since 1950 to the present has been slightly over 1 percent per year.

Adult Education Program Enrollments

Education beyond the high school has other aspects, chief of which is broadly defined as adult education. The Territorial Department of Public Instruction's adult education program includes offerings in basic adult English, citizenship, elementary and high school courses, industrial in-service training programs and general community interest courses. The basic English, citizenship, elementary and high school courses are not generally classes designed for high school graduates.

In the adult education courses other than basic English, citizenship, elementary school and high school courses, the attendance was about 1,670 in 1957. Undoubtedly not all were high school graduates, but certainly a good percentage of them were. The DPI's adult education program has grown from a total enrollment of 2,900 in 1946 to 12,960 in the calendar year 1957. In the latter year it included 150 course offerings at 40 centers.

The other chief provider of adult education offerings in the Territory is the University of Hawaii's General Studies Program. By agreement with the DPI, it does not offer non-credit courses except in areas in which it alone has the physical facilities and qualified staff. Established a little less than two years ago, to take over the old "Extension Division" work, the College of General Studies had an enrollment of 2,122 individuals in the Fall of 1957.* The College provides courses for college credit, correspondence courses and non-credit courses. About 40 percent of its evening credit students are servicemen. It also conducts short-term post-graduate and special interest courses. Certainly on the basis of past growth, our growing population and increased emphasis on education, the number of high school graduates who will be enrolled in adult education courses by 1968 will have increased prodigiously.

*1,514 College of General Studies students were registered for 2,386 credit courses and 608 were registered for one or more non-credit courses.

Prospective Needs of Institutions for Education Beyond the High School in the Territory of Hawaii Over the Next Decade

ESTIMATED NEEDS OF THE UNIVERSITY AND COLLEGES 1958-1968

Among those graduating high school seniors in the Territory of Hawaii today who plan an education beyond the high school, approximately two thirds anticipate a university or liberal arts college education. Of those currently engaged in regular training beyond the high school in the Territory, approximately 75 percent attend the University of Hawaii and the private liberal arts colleges. For these reasons, and because the nature of these schools makes comparisons with other types of training inappropriate, the University and private liberal arts colleges are treated together in this section. Other types of training, including professional nurses training, business colleges, technical and industrial schools, and adult education are presented together in the immediately following section.

In addition to the University of Hawaii, the Territory has three private liberal arts colleges — Chaminade College, Jackson College and Honolulu Christian College. It has two junior colleges—Church College of Hawaii at Laie, Oahu, and Maunaolu Community College at Paia, Maui. A brief description of each institution, courses offered, faculty and staff and degrees granted is included in Appendix I.

Preliminary estimates of the required increases in staff, facilities and operations of these institutions over the decade 1958-1968 are presented below. The estimates are based on the assumption that the increases will be directly proportionate to the prospective increases in enrollments for this same period.

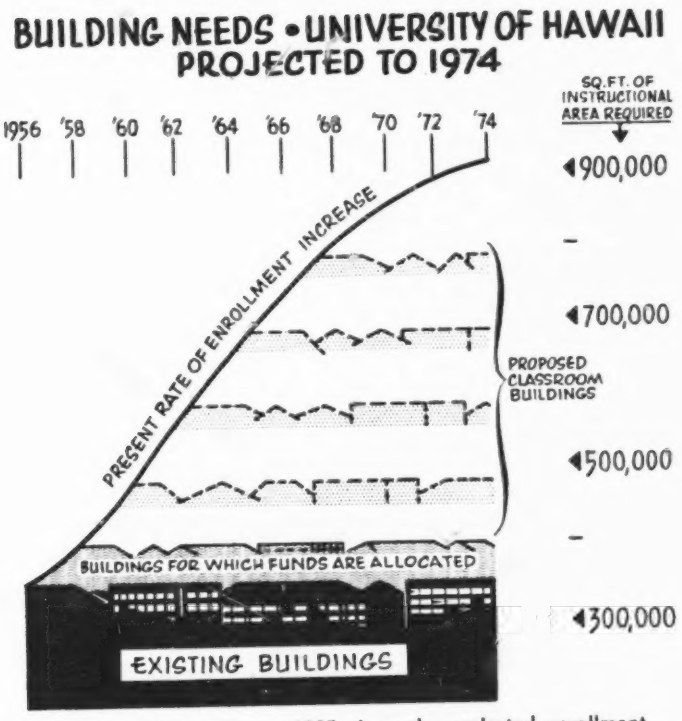
Estimated Needs for the University of Hawaii

The University of Hawaii has a full-time teaching faculty of about 350 (excluding College of General Studies and Summer School). If the faculty is to be increased at a rate comparable to the anticipated enrollment increase it will mean an increase of almost 107 percent (to 690) by 1968. The yearly additions necessary to accomplish this have been indicated. If the increase in *total* number of University employees is projected, the necessary increase is even more pronounced, involving an increase from 875 to 1,800 employees by 1968.

In projecting its facility needs the University has used the figure 76.9 square feet per FTSE as being an adequate allocation of space for all purposes.* For the 1957-58 FTSE enrollment of 5,048 there were approximately 69.6 square feet per FTSE, or somewhat less (by 35,723 square feet) than is needed.† To provide the expected enrollment of 1968 with 76.9 square feet per FTSE the

*Current ratio at time of study for future expansion in 1957. Any economies in space utilization which might reduce this figure are expected to be offset by specialized type of training requiring special space and facility allocations.

†At the present time the physical plant of the University of Hawaii includes 351,458 square feet of instructional area, 10 percent (36,708 square feet) of which consists of temporary barracks type buildings.



*Based on 76.8 sq. ft. per FTSE, times the projected enrollment.

Source: Bachman Plan & University of Hawaii Estimates of Capital Improvements Required

additional square footage of 800,441 for instructional purposes will be required. The increase as needed by years has been indicated earlier.* The relationship of this instructional area to predicted enrollments is pictured in the graph above.

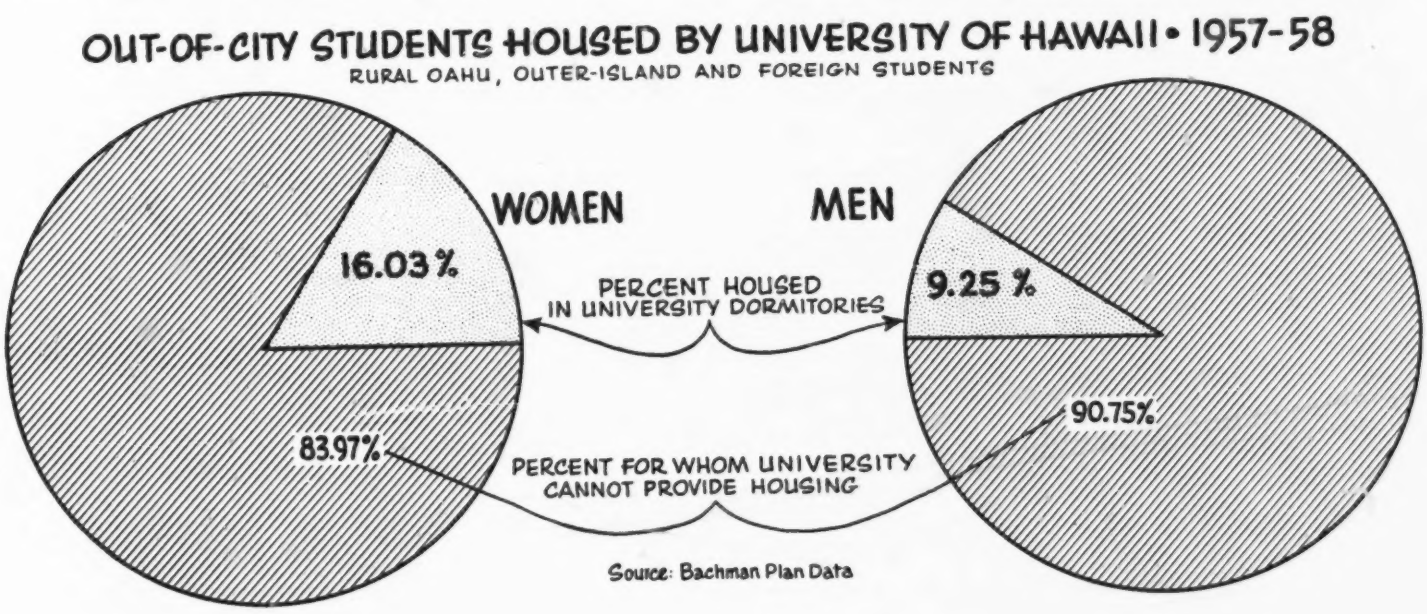
*At the present time three new buildings—engineering-mathematics, physics and music—have been authorized by the Territorial Legislature and funds allocated for them. After elimination of the temporary engineering and music buildings they will represent a net gain of approximately 52,050 square feet. An additional 23,528 square feet of temporary facilities have been or are scheduled for demolition before 1960. To replace this area and provide additional area for increased enrollments the University estimates a need for four additional classroom buildings of 100,000 sq. ft. each. This would probably increase the instructional area sufficiently to very nearly meet the space needs of 1967-68.

The instructional area needs of the University represent but a portion of the total needs. Some of the needed building and maintenance projects of the University have been authorized by the Territorial Legislature for the University of Hawaii but without allocation of funds.†

In addition to these authorized projects for which funds must still be allocated, the University has made advance estimates of capital improvements which will be required in each of the next three legislative bienniums. Appendix I provides a listing of the estimated needs and cost. In actual fact many of the projects scheduled for future bienniums are pressing current needs. Additional dormitories for men and women, for example, are badly needed at the present time, as is illustrated in the graph below. Only a priority on need and an acceptance of the fact that all cannot be accomplished at once have moved some of the projects into future requests. The estimated capital improvements required over the four bienniums 1957-1965 represent a total investment of $13,509,000. The increments by bienniums are illustrated in the graph at top of next page. The yearly average would be $1,700,000.

The operating budget of the University of Hawaii for 1957-1958 (excluding self-supporting enterprises such as dormitories) is presented in the graph at bottom of next page. A straight projection of it in ratio of the estimated enrollment by 1968

†These include one of the four classroom buildings (a portion of the necessary funds of which have been allocated), an agricultural extension service building, four agricultural experimental stations on various islands, a Hilo branch classroom, athletic field, off-street parking, University high school expansions, and an oceanarium.



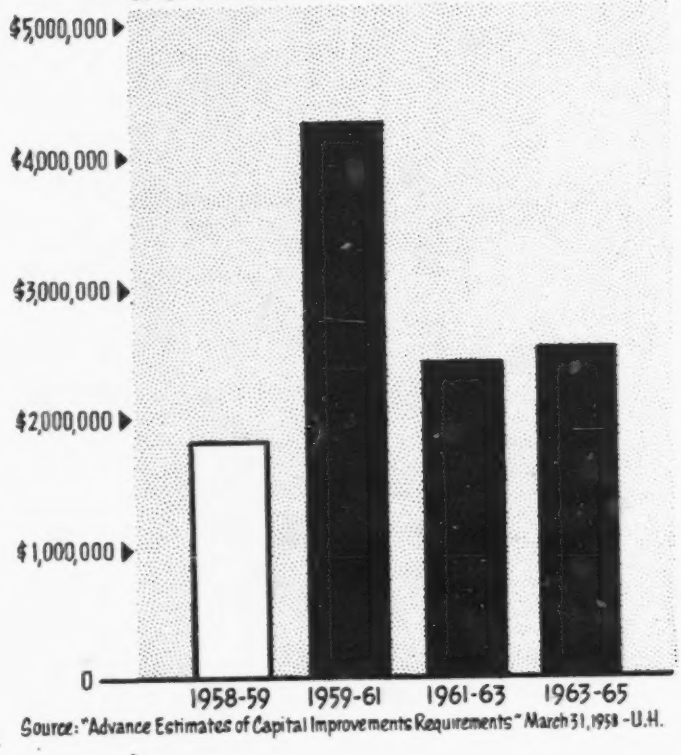
Source: Bachman Plan Data

would mean an annual operating budget at that time of $13,400,000. The yearly increases are illustrated in the upper graph on page 20.

What will the overall cost of these increases in staff, facilities and operations be over the next ten years? A 107 percent increase in instructional faculty alone would involve a budget increase of at least $2,500,000, assuming a static salary schedule and proportion of faculty in each rank. This increase does not include administrative personnel of the University, the Summer Session, part of the College of General Studies, activities related to educational departments, organized research, the agricultural experimental station, agricultural extension service, other extension and public services, library, and operation and maintenance. It is obvious that additional costs must be met in those areas.

A straight line projection in faculty, facility and operating costs to 1968 based on current costs and projected enrollments would place the University's annual budget by 1968 at $17,500,000.

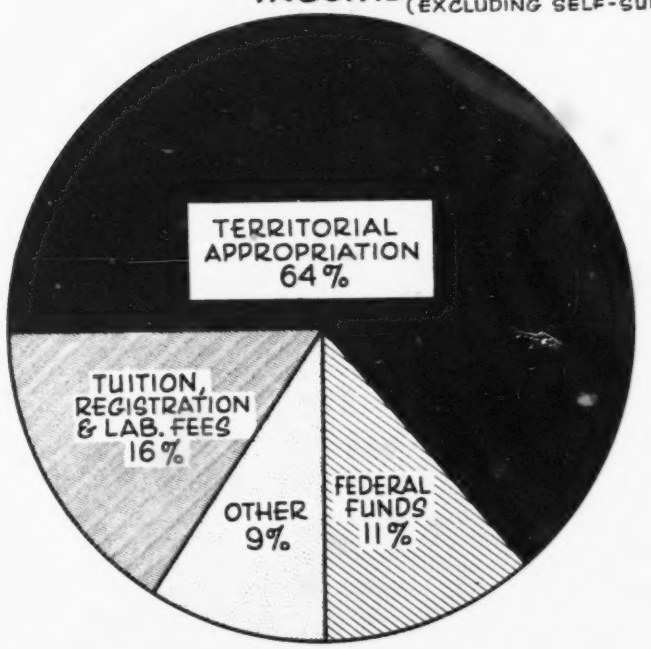
PROJECTED CAPITAL IMPROVEMENT NEEDS UNIVERSITY OF HAWAII



Source: "Advance Estimates of Capital Improvements Requirements" March 31, 1958 - U.H.

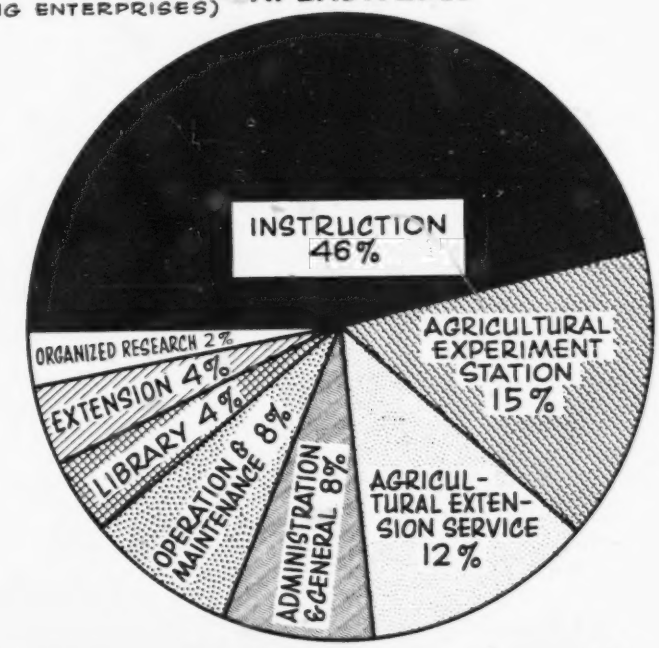
OPERATING BUDGET, UNIVERSITY OF HAWAII • 1957-1958

INCOME (EXCLUDING SELF-SUPPORTING ENTERPRISES)



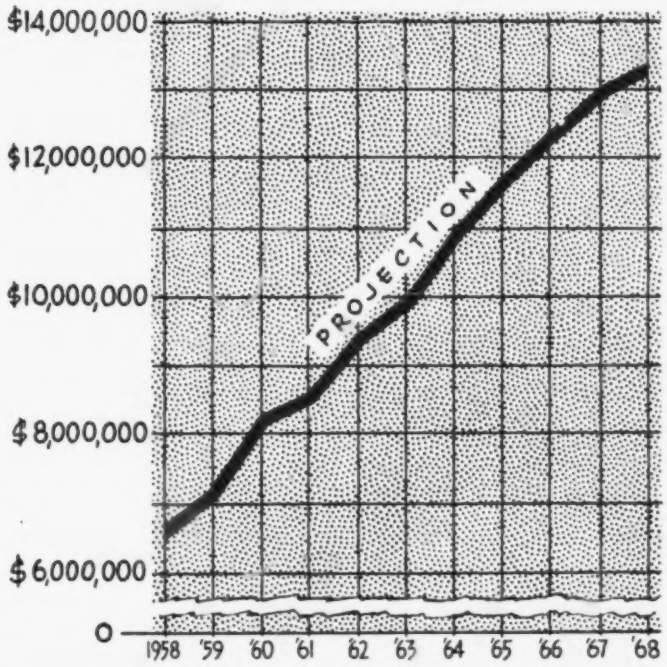
TERRITORIAL APPROPRIATION (Act 147, SLH, 1957 plus augmentations)	$	4,155,109
FEDERAL FUNDS (Instruction, Agricultural Experimental Station, Agricultural Extension Service)		708,952
TUITION, REGISTRATION & LABORATORY FEES		1,035,378
OTHER FEES & SALES OF SERVICES		598,724
TOTAL	$	6,498,163

EXPENDITURES



ADMINISTRATION & GENERAL	$	547,164
RESIDENT INSTRUCTION & DEPARTMENTAL RESEARCH		3,010,007
ORGANIZED RESEARCH		176,557
AGRICULTURAL EXPERIMENT STATION		952,148
AGRICULTURAL EXTENSION SERVICE		759,873
OTHER EXTENSION & PUBLIC SERVICES		234,377
LIBRARY		257,639
OPERATION & MAINTENANCE OF PLANT		543,299
RESERVE (Current Instruction & Student Help)		12,099
TOTAL	$	6,498,163

OPERATING BUDGET-UNIVERSITY OF HAWAII 1958 - 1968*



*Based on current budget/FTSE enrollment.

Estimated Needs for the Private Liberal Arts Colleges

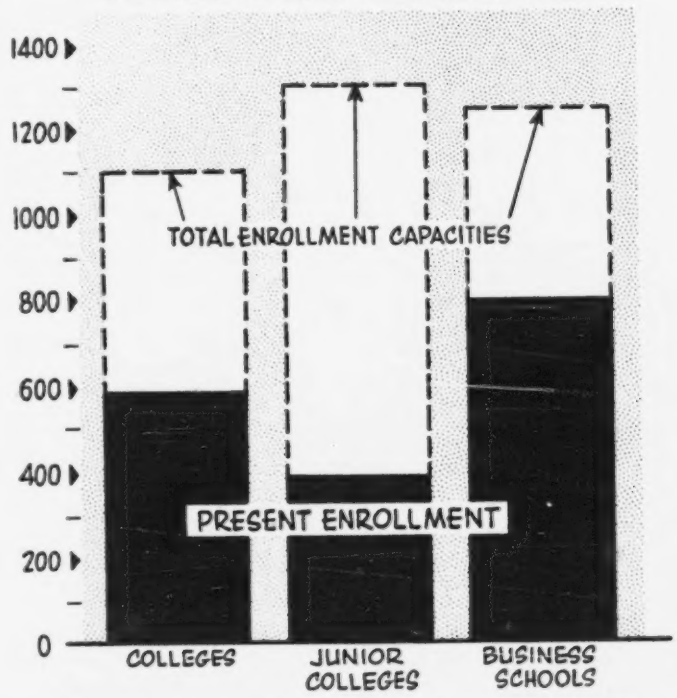
The staff, facility and operating needs for the liberal arts colleges, other than the University of Hawaii, cannot be projected for the next 10 years in the same clear-cut fashion as those of the University. With the exception of one, these colleges have been established within the last seven years and none has experienced peak enrollment. All could accommodate substantially more students than they do at present. As private institutions they may limit their enrollment at the point of capacity for their facilities. All have religious organizational support of varying degrees. In at least two instances this support is sufficiently strong that the institutions either are assured the use of additional existing facilities should the demand arise, or they are assured that additional facilities will be erected if needed.

Nevertheless we do know the present enrollments of these institutions and the capacity number which can be accommodated with the present facilities, as has been illustrated in the graph below. At present the FTSE enrollments of the five institutions total approximately 980 students. They have a combined capacity to accommodate 2,420* students. This allows for a potential increase of about 146 percent. If the increase in enrollments of these colleges follows the national expectations for colleges and that of the University of Hawaii for doubled enrollments by 1968-1970 they should be able to meet the demand in terms of facilities. The combined plant assets of these institutions total nearly 5,700,000. See Appendix I for discussion of the individual college assets.

The above discussion should not imply that all of these institutions have all the facilities that are deemed necessary or desirable educationally. Chaminade College plans the future construction of a chapel, student-union building and dormitory. Honolulu Christian College needs permanent facilities of all kinds. Jackson College anticipates expenditure of $65,000 by June 30 of 1960 for a new library building, renovation of a secondary building and extension and remodeling of its principal building. Maunaolu College plans immediate construction of a small classroom-office building. It also needs a library building.

*The potential capacity of Honolulu Christian College cannot be estimated until permanent facilities are acquired.

ENROLLMENT CAPACITY: PRIVATE INSTITUTIONS FOR EDUCATION BEYOND THE HIGH SCHOOL



Exclusive of University of Hawaii. Based on present facilities as stated officially by each school shown.

Faculty recruitment to meet expanded enrollment will be similar to that of other institutions. A doubled FTSE enrollment in these institutions would mean faculty increases of approximately 79 individuals*—or a total faculty of 156—if the increase is directly proportionate to the enrollment increase.

Similarly, on the basis of directly proportionate increases, a doubled enrollment by 1968 will necessitate operating budgets for these institutions totaling close to $1,300,000.†

Refinement of Estimates

The preliminary estimates given above require refinement. Estimated increases in staff, facilities and operations directly proportionate to the increase in perspective enrollment may overlook a number of important considerations. The capacity to expand income is usually limited. It is necessary to recognize that the projected enrollment for education beyond the high school with its anticipated facility and faculty demands, if projected in terms of the present, may well extend the need for income beyond the capacity to provide.

It is essential that maximum benefit and quality be secured from the education dollar. This will necessitate effective utilization of space. This in turn may mean class scheduling during the less desired hours of faculty and students. It may mean the elimination or less frequent scheduling of some of the smaller classes. Some kinds of classes may have to be larger. At the same time the determination of faculty load must take into consideration differences in type of teaching done, research engaged in, extra-curricular demands, etc. The unit costs per student of various departments will have to be realistic in view of the type of instruction being offered. The relation of faculty to enrollment within each department will have to be justifiable.

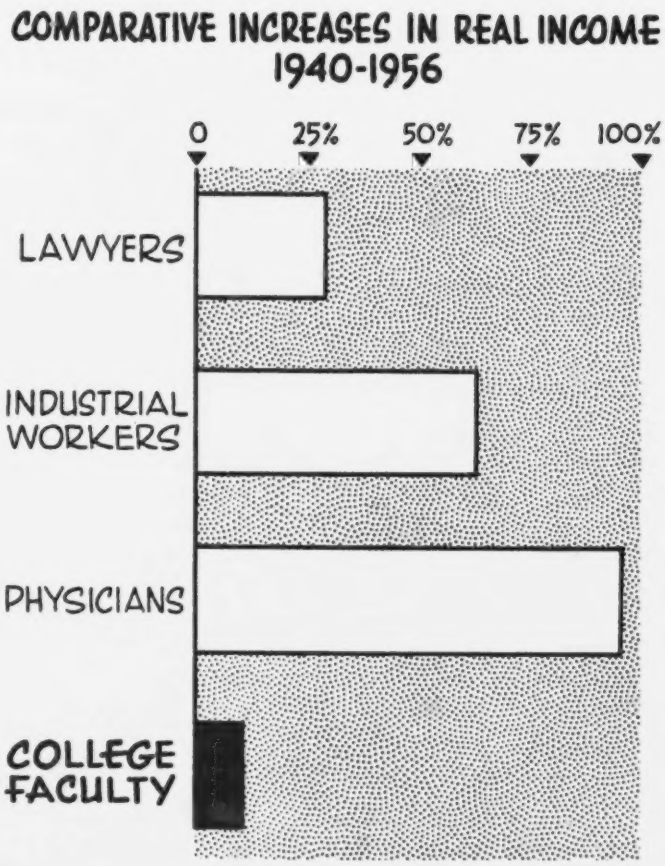
*The current faculty of these institutions number: Chaminade College—10 full-time and 5 part-time, Jackson College—22 full-time and several part-time, Honolulu Christian College—1 full-time and 8 part-time, Church College of Hawäii—23 full-time and several part-time, and Maunaolu Community College—9 full-time and 5 part-time.

†The 1957-58 operating budgets were: Chaminade College—approximately $100,000 plus contributed services of Marianist faculty; Jackson College—$150,262; Honolulu Christian College—$25,000; Church College of Hawaii—$273,498 and Maunaolu Community College—$70,000. Grand total $618,760.

Refinement of Staff Estimates

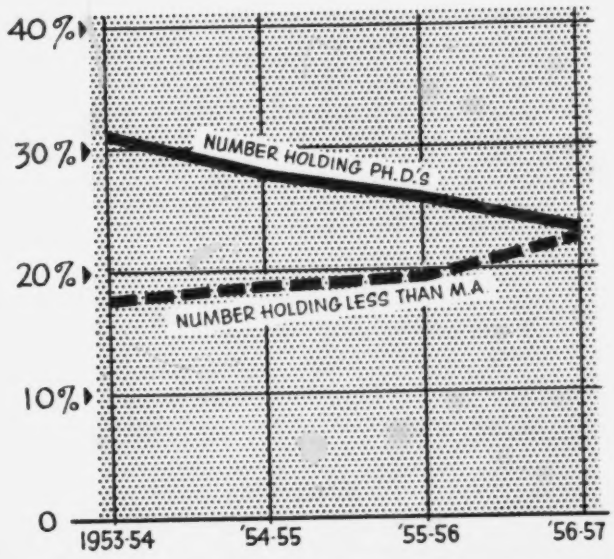
Perhaps the most crucial consideration in an attempt to refine the estimated staff needs is that of teachers' salaries. This item was regarded as of most pressing importance by the President's Committee on Education Beyond the High School. In the Second Report to the President the committee recommended that all persons responsible for academic budgets give the absolutely highest priority to raising the salaries of college and university teachers. The committee warns that physical expansion at the expense of diverting funds from needed faculty salary increases must be avoided. In order to retain present, and recruit new staff, salaries must be boosted substantially above the present level and boosted quickly—particularly at the higher ranks.

Since 1940, especially, college teachers' incomes in the United States have seriously deteriorated in buying power. They are no longer competitive with other professional groups, and scarcely with average wage earners. The graph below illustrates the comparative increases in "real" income between 1940-1956 for various occu-



Source: President's Committee on Education Beyond the High School (2nd Report, p. 34).

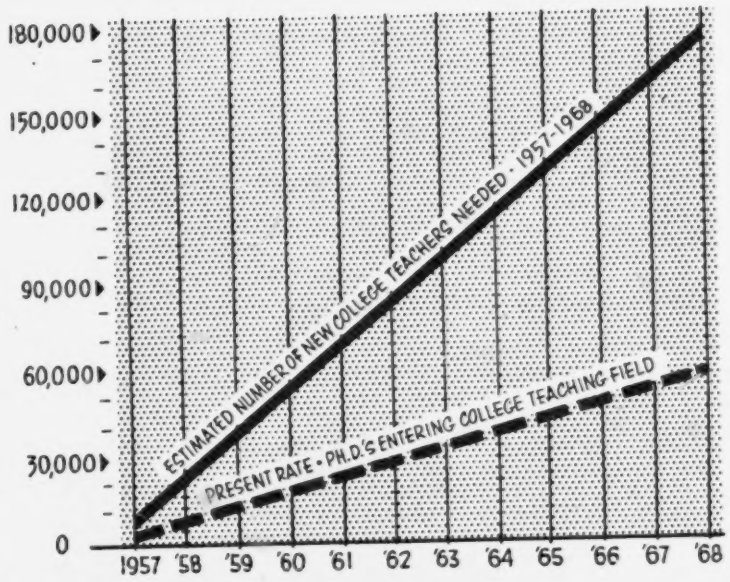
TRAINING OF COLLEGE TEACHERS *



*Training of new entrants into fulltime college teaching nationally.

Source: Research Division, National Education Association

NATIONAL DEMAND FOR & SUPPLY OF COLLEGE TEACHERS



Source: President's Committee on Education Beyond the High School

pations including teaching. As a result, industry and government are "raiding" the potential pool of teachers at just the time when education faces its greatest demand for teachers.

If the situation outlined above continues the alternative results are clear. Either the quality of college teaching will deteriorate severely or the opportunity for a college education will be denied thousands of potential college students. As for deteriorating quality, the graph above, left, portrays that the number of holders of the doctor's degree among newly employed full-time college and university teachers has decreased about 25 percent since 1953-54 and that those with less than the master's degree have increased about 27 percent over the same period.

The inevitably widening gap between the demand and supply of qualified teachers over the next decade if the present situation continues is illustrated by the graph at right above. At present the gap is being filled with increasing numbers from high school faculties (diminishing their already depleted ranks), from business, from the military, from government civilian service and from homemaking in this order. Although many of these recruits are highly qualified for college teaching, many also are woefully unqualified. According to the President's Committee on Education Beyond the High School, it will require an average increase in faculty salaries of something like 75 to 80 percent to restore these salaries to a competitive position in the professional labor market comparable to that which they held prior to World War II. Once this position is restored, it will probably require an average increase by 1970 of 100 to 125 percent above present salaries to maintain this position.

This is the national picture for the United States. The educational institutions and students of Hawaii cannot escape the consequences. Territorial institutions must compete with Mainland institutions for faculty. They begin with three handicaps—a greater expense for the teacher in moving to Hawaii to accept a position, isolation from certain professional contacts once he is here, and a possibly higher cost of living. Hawaii's ideal climate is a mildly compensating factor.

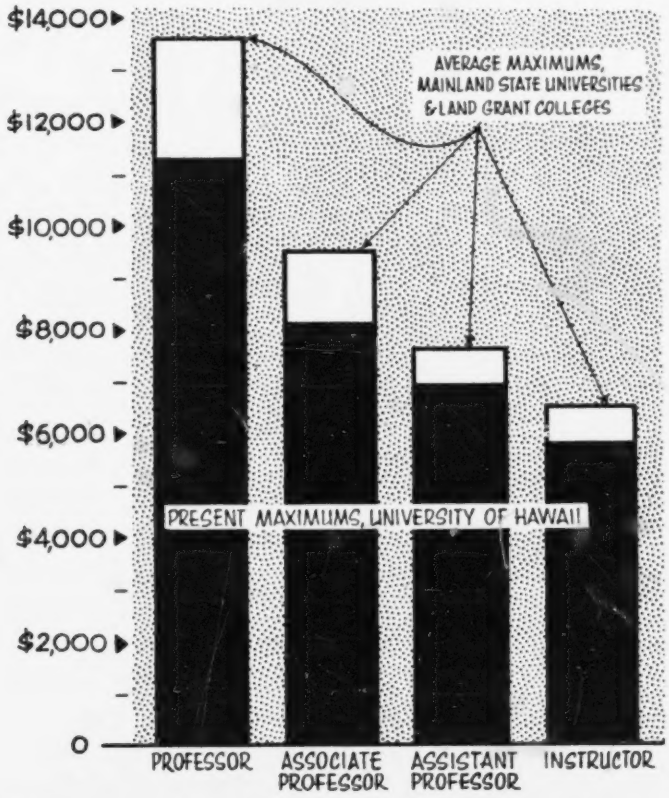
At the lower ranks of instructor and assistant professor the University of Hawaii compared somewhat favorably in salaries with Mainland institu-

tions in 1957-1958. The graph at left below illustrates that at the higher levels of associate and full professors, however, the University did not compare favorably. The implications for the University are obvious—it finds it difficult to recruit top level staff and it tends to lose faculty as they are advanced to the upper ranks.

Furthermore, a comparison of local and Mainland salaries at any given time may be radically altered by disproportionate salary increases within a year. The graph at right below illustrates the salary increases at the University of Hawaii as compared with the average of state universities and land grant colleges over the past three years. The increases needed to raise the *maximum* salary at each rank at the University of Hawaii to make them comparable with the present *average maximum* of Mainland state universities and land grant colleges is represented in the graph at left below. If a reasonable consideration for the higher cost of living in the Territory is added, the necessary increases would be even greater. Faculty salaries at the University of Hawaii, therefore, first need revision to make them competitive with Mainland schools. Then, with all colleges and universities of the United States, they need sharp increases to make them competitive in the professional labor market.

It must be concluded that adequate support of good college faculty should cost a great deal more in 1968 than it does today. At the same time, it is anticipated that certain economies can be instituted. It is possible, for example, that the student-faculty ratio may be increased somewhat without a seriously detrimental effect on the quality of education given. Indeed, the approaching shortage of teachers will necessitate that more people be taught more efficiently by fewer teachers. The elimination of the many non-teaching functions often burdening teachers today by increased clerical and assistant level help will contribute to extended teaching capacity. Conceivably students

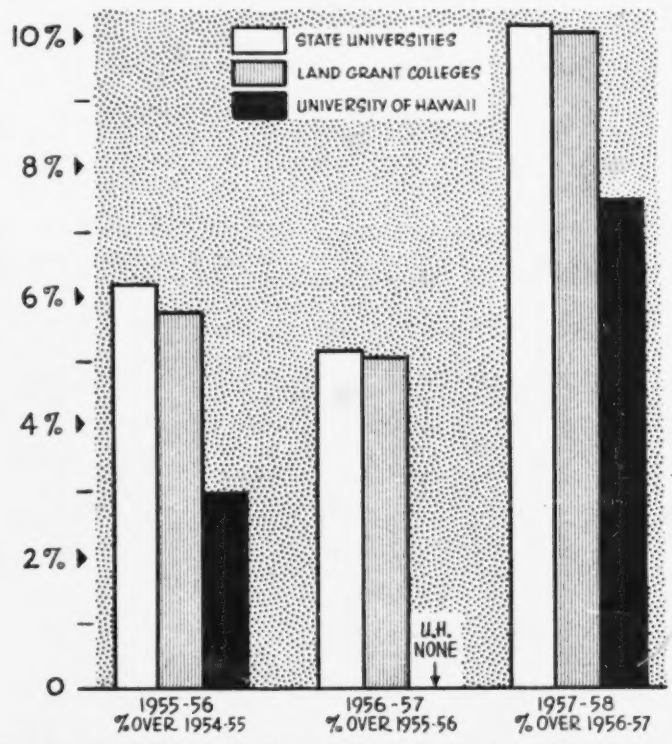
SALARIES AT UNIVERSITY OF HAWAII *Compared with Average Maximums at Mainland State Universities and Land Grant Colleges*



*Increases required to make them comparable with average maximum of Mainland State Universities and Land Grant Colleges, 1957-1958.

Source: Faculty Salary Committee, University of Hawaii.

SALARY INCREASES: 1955-1958
University of Hawaii compared with State Universities and Land Grant Colleges (Percent)



*Percentage increases at University of Hawaii, State Universities and Land Grant Colleges.

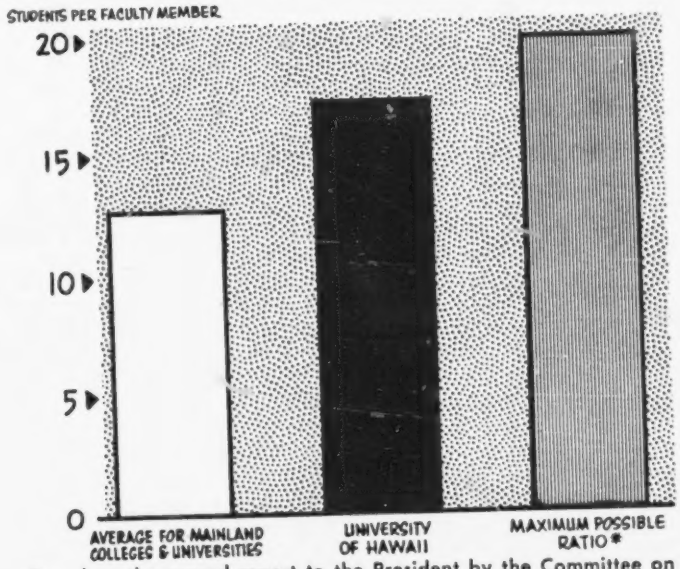
Source: National Education Association-Research Division and Faculty Salary Committee, University of Hawaii.

can be given greater responsibility in their education process, curriculums simplified, and the use of TV and films increased, as effective mediums for some kinds of teaching. Most research to date, however, has indicated that TV may spread talent but does not reduce the unit cost of instruction.

The maximum student-faculty ratio given in the graph immediately below, is one considered possible by the President's Committee on Education Beyond the high school. It *assumes* better teachers who are adequately compensated and relieved of non-teaching duties. Teachers will not be relieved of their many non-teaching and often routine clerical duties, of course, without increases in the number of clerical and teaching assistant personnel.

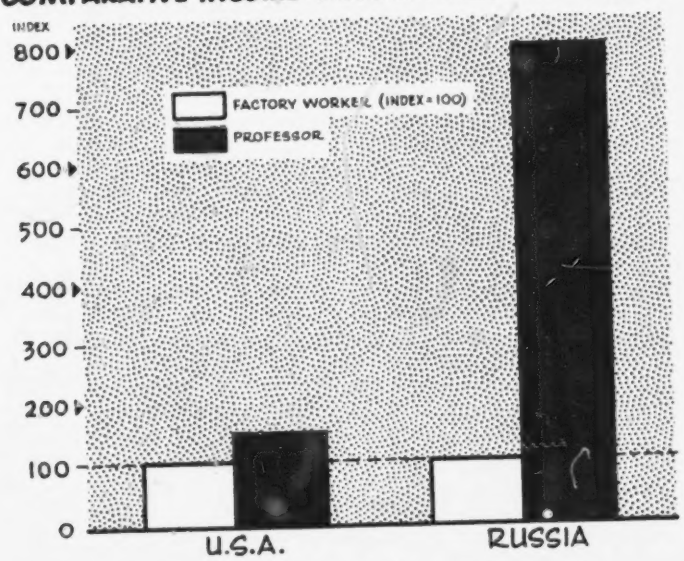
The need for sufficient numbers of trained teachers cannot be overemphasized. The United States is involved in competition for world leadership and striving for a dependable peace. In the long run, survival may well depend on an educated and skilled citizenry. In comparing the relative position of the professor to the factory worker in the U.S.S.R. and the United States it would seem that the Russians, not the Americans, are the capitalists in the field of education.

STUDENT-FACULTY RATIOS



Based on the second report to the President by the Committee on Education beyond the High School.

COMPARATIVE INCOME: RUSSIAN & U.S. PROFESSORS*



*With average wages of factory worker in each country.

Source: Dept. of Economics, McGraw-Hill Publishing Co.

Refinement of Estimates in Facilities

New facilities will be needed for the increased enrollments, to be sure. It is doubtful that they will have to increase in direct proportion to enrollment. Greater utilization undoubtedly can be made of existing facilities. At the University of Hawaii, for example, a space utilization study was made recently employing a formula adopted by some 90 other institutions. The study gave results in terms of

(1) the degree to which classrooms and laboratories were used compared with the maximum possible use during a 44-hour week.
(2) the extent to which the existing student—stations (desk, chair, equipment, etc.) were utilized in a 44-hour week and
(3) the percentage of student-stations in a room which are occupied when the room is being used. On the basis of actual findings and in comparing itself with the 90 other institutions which have employed this formula, the University of Hawaii found that it utilizes its general classrooms well but that the student-stations within classrooms when in actual use are not used to capacity.

These findings have several implications. In planning new buildings, they provide a guide to the optimum size classrooms for particular teaching needs. They also indicate economies which can be made in the use of present facilities. It would be a serious error, however, to overlook the fact that the need for many types of facilities in higher education are dictated more by the nature of training than by enrollments. Particularly is this true of some of the highly specialized and technical training. To regulate the course offering in terms of

maximum use of facilities only would jeopardize some of the most valuable and essential aspects of higher education.

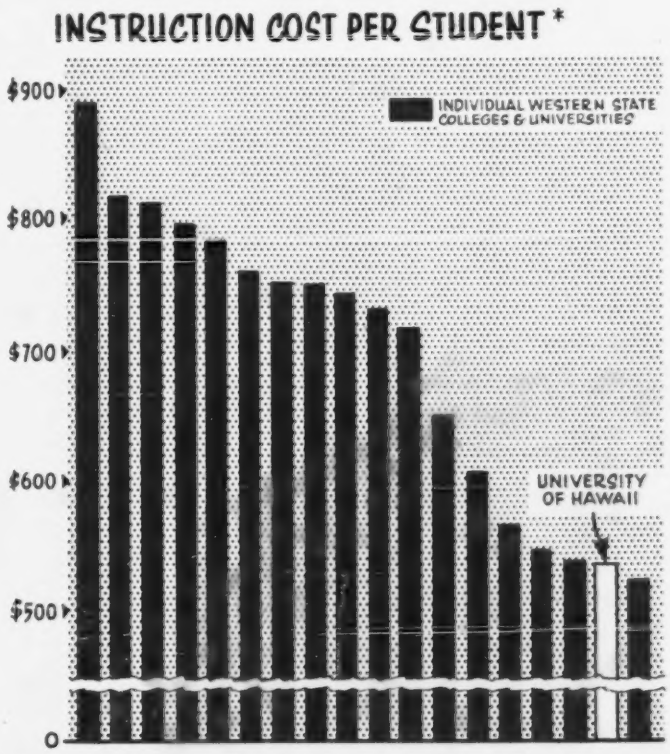
The possibility of participation in WICHE (Western Interstate Commission for Higher Education) by the Territory of Hawaii is another practicable economy. Within WICHE the students of several states have access to a high-cost professional school of one state with the costs pro-rated to an extent among the participating states. This has particular advantages for the University of Hawaii which does not have some of the high cost professional schools such as medicine or dentistry. It is obviously more economical for qualified students to attend one of the WICHE schools where a particular professional college exists than would be the establishment of the school at the University of Hawaii for a relatively small number of students.

Refinement of Estimates in Operations

A straight projection of operating costs likewise has certain fallacies. Administrative and plant maintenance costs are not likely to rise in direct proportion to enrollment increases. Rather, the unit cost is likely to decrease. The upward trend in costs of administration and maintenance may offset some of these savings in unit costs, but actual operating costs per student should decrease slightly. At the present time the University of Hawaii maintains one of the lowest cost-per-student ratios, among state universities, as is demonstrated at right. Although generally slightly higher than for the University of Hawaii, the instructional costs per student in the Territory's private liberal arts colleges—average $630—are unusually low for private institutions. In many areas of the United States at present, for instance, well over $2,000 per student is being expended each year on the operation of certain private institutions.

As noted previously, a straight projection of the number of faculty needed in Hawaii's colleges might be reduced by an increase in the student-faculty ratio. As has also been emphasized, however, it is essential that the price paid for the faculty is substantially increased. It is estimated that an increase in faculty salaries at the University of Hawaii commensurate with the recommended increases of the President's Commission on Education Beyond the High School* would cost an additional $7,000,000 over the next decade. There will be some added expense too in relieving the faculty of non-teaching functions through adequate secretarial services, assistants, equipment and so forth.

These estimates all assume a number of constant conditions over the next decade. They assume, for example, a constant dollar value. Continued inflation of the price level could reduce the value of the projected estimates. The estimates assume a similarity in kind of facilities needed in the next decade with our current facility needs. It is conceivable that the technical developments of the atomic and hydrogen age will create demands for training facilities and equipment unknown at the present time. Territorial demands for training in electrical engineering, for instance, have recently caused the installation of a curriculum in that area at the University of Hawaii with considerable new and comparatively expensive equipment needed. Science instruction generally requires constant assistance and support with delicate and accurately controlled tools and materials. It is just not feasible to train an engineer to run a 10 million dollar plant by giving him a 20 dollar generator and some pieces of rusty wire to play with.



*University of Hawaii compared with 17 Western State Colleges and State Universities, 1956-1957.

Source: Data from Report of Current *Per-Student-Cost Study*, Western State Colleges and Universities, and from University of Hawaii.

*Double 1956 salaries by 1970.

Estimated Needs of Institutions for Education Beyond the High School other than Colleges, 1958-1968

In addition to the University of Hawaii and the several liberal arts colleges, the opportunities for an education beyond the high school in the Territory of Hawaii include one art school, one barber school, two beauty schools, four business and stenographic schools, two private diploma schools of nursing, five technical schools under the DPI (Department of Public Instruction) and three private technical and trade schools.* In addition, there are a number of sewing schools.

The adult education program of the Department of Public Instruction provides varied opportunities for cultural, hobby, recreational and skill development. Some of these are elementary or high school credit (academic) classes, others non-credit (community interest).

The adult education opportunities of the College of General Studies at the University provide college credit courses which may be applied toward a degree and non-credit courses for special interests. In addition, Chaminade College provides some adult courses and Church College of Hawaii permits qualified individuals to attend selected courses as "unclassified" students. The offerings of the various schools and the period of training involved are discussed in Appendix II.

Over 3,000† individuals are enrolled annually in these various programs as full-time day students. An additional 4,400 students are enrolled in evening classes. In neither case are all the students high school graduates. With their present facilities or planned expansions these institutions could accommodate 4,350 full-time day students or an increase of about 41 percent over current enrollments. Clearly, however, the present facilities cannot accommodate doubled enrollment in 1968.

In determining the practical requirements for an adequate program in these areas of education beyond the high school during the next decade there are some special considerations involved. Most of these institutions are private enterprises. And most are solely dependent on tuitions for their operating budgets. All of them could accommodate more students than they currently have enrolled. Thus, it can only be assumed that they will either limit their enrollments when their peak capacity is reached or will expand their facilities to accommodate more. Some do not wish to expand beyond a certain size, in fear of jeopardizing the value of their small classes. It is conceivable, therefore, that if the demand for training in these areas increases at a rate comparable with that for college and university training the present facilities for some types of training will be inadequate at the end of 10 years.

Looking at the different types of training individually, the Art School of the Honolulu Art Academy could more than double its present enrollment with present facilities. It seems likely that it will be capable of meeting any demands for this type of training within the next 10 years. Queen's Hospital School of Nursing could accommodate up to 30 percent more than its present enrollment, and St. Francis Hospital School of Nursing approximately 33 percent more. The School of Nursing of the University of Hawaii, on the other hand, cannot expand beyond its present enrollment unless new sources of clinical instruction are found. The very marked increase in the labor market demand for services such as nursing would lead us to believe that there may be a shortage of opportunities for this type of training within the next decade.

Private business and stenographic schools of Honolulu are equipped at present to handle a 53 percent increase in enrollment. The Hilo Commercial College in Hilo, Hawaii, can accommodate a 54 percent increase. Although the school age population on the Island of Hawaii has increased slightly in recent years, the general population pattern of Hawaii is one of declining numbers. The expansion potential of the Hilo Commercial College is probably adequate to meet the demands for this type of training on that island.

*Art School—Art School of the Academy of Arts in Honolulu; Barber School—Honolulu Barber School in Honolulu; Beauty Schools—Honolulu School of Beauty and Royal School of Beauty Culture in Honolulu; Business and Stenographic Schools—Cannon School of Business, Honolulu Business College, and Stenographic Institute in Honolulu, Hilo Commercial College; Schools of Nursing—Queen's Hospital School of Nursing and St. Francis Hospital School of Nursing in Honolulu; DPI Technical Schools—Honolulu Technical and Kapiolani Technical in Honolulu, Hawaii Technical, Kauai Technical and Maui Technical; Private Technical and Trade Schools—Electro Technical and Honolulu Automotive in Honolulu, Pacific Trade in Wailuku, Maui.

†Pacific Trade School not included.

INCOME: D.P.I. TRADE & INDUSTRIAL SCHOOLS

*When feasible, various technical shops use production jobs accepted from the general public and government agencies as training units for which money is received.

The expansion potential with present facilities of the business and stenographic schools of the Island of Oahu is inadequate. On Oahu the demand for this type of trained personnel is growing rapidly. One business college at the present time reports an ability to fill only 10 percent of their employment calls. The Joint Committee on Employment and Guidance of Youth publication states that the need for high quality stenographers is not being met. Since these institutions do not enjoy peak enrollments at present it would appear that the shortage is in number of students selecting this type of training. Financial capacity to undertake training, however, may be an additional factor.

The business education program of the DPI, which requires a very minimal fee, has had more applicants for training than could be accommodated. As the field becomes more attractive through competition for quality employees, the demand for this type of training is likely to increase. The addition of business education to the DPI offerings is relatively recent. It is an area of training in which expansion is planned and it is possible that with adequate funds for staff and facilities the program will provide sufficient opportunities to fill the gap between demand for and supply of this type of education within the next decade.

It is perhaps in the other technical and trade schools that the greatest demand for training other than college is going to be felt. It has been demonstrated that the demand for hotel, secretarial, electronic, aircraft maintenance, building and other service personnel is likely to continue to increase rapidly. The DPI Technical Schools experienced a growth of 142 percent in enrollment and a 173 percent increase in number of classes from 1945-1957. At the present time 1,150 high school graduates are served as daytime students. An additional 664 students bring the total daytime enrollment of the technical schools to 1,814. A 25 percent increase above the present enrollments is the maximum capacity with present facilities. The present evening enrollment of 3,986 indentured apprentices and adults is the maximum enrollment which can be accommodated. Some applicants for evening extension courses are being rejected for lack of facilities.

In terms of public funds expended, the technical schools of the DPI are the only schools of this kind which are involved. The 1957-59 biennium operating budget for the technical schools is $1,205,277 or approximately $602,638 annually. The sources of income are illustrated in the accompanying graph. The five Technical Schools occupy 56 acres of land. The land, exclusive of that set aside for school by Executive Order of the Governor, and plant assets of the DPI Technical Schools total approximately $2,652,000.

The Trade and Industrial Education Division of the DPI has indicated a need for new library facilities and a building for the development of new programs in business and retail trade on the Island of Hawaii. At Maui Technical School, additional classrooms are needed for science, electronics, drafting and auto body repair and painting. The Kauai Technical School is in need of a library and science laboratory. The Honolulu Technical School has adequate land space but very inadequate facilities at the present time. Complete rebuilding of this school is envisioned. Two programs of the Kapiolani Technical School in Honolulu—those of hotel and restaurant training and business education—are presently housed in inadequate temporary facilities. In both of these programs the limitations of facilities have restricted the number of trainees, and adequate facilities are vitally needed. In addition, there are a number of business

and service occupations for which training centers are needed and plans projected.

Realization of the total building program is envisioned over the next three bienniums. It involves an estimated capital expenditure of approximately $4,900,000. The completion of this building program would result in a capacity to accommodate approximately twice the present enrollment. In light of the expected increase in number of high school graduates who will seek further education, the indicated labor market needs, and the present facilities, this appears to be reasonable planning.

The demand for adult education beyond the high school over the next ten years is perhaps the most confusing to anticipate. Many of the adult education offerings are not designed for the high school graduate. The highest enrollments in the DPI programs, for example, are for citizenship and basic adult English classes. In addition the DPI provides adult education classes for the completion of elementary or high school. Beyond these offerings, however, the DPI Adult Education Program does offer courses of community interest which undoubtedly attract high school graduates. Certainly some of the specialized training sessions conducted for business and governmental agencies provide education beyond the high school. Just what percentage of the approximately 2,500 individuals involved in the community interest courses in a year are high school graduates is unknown.

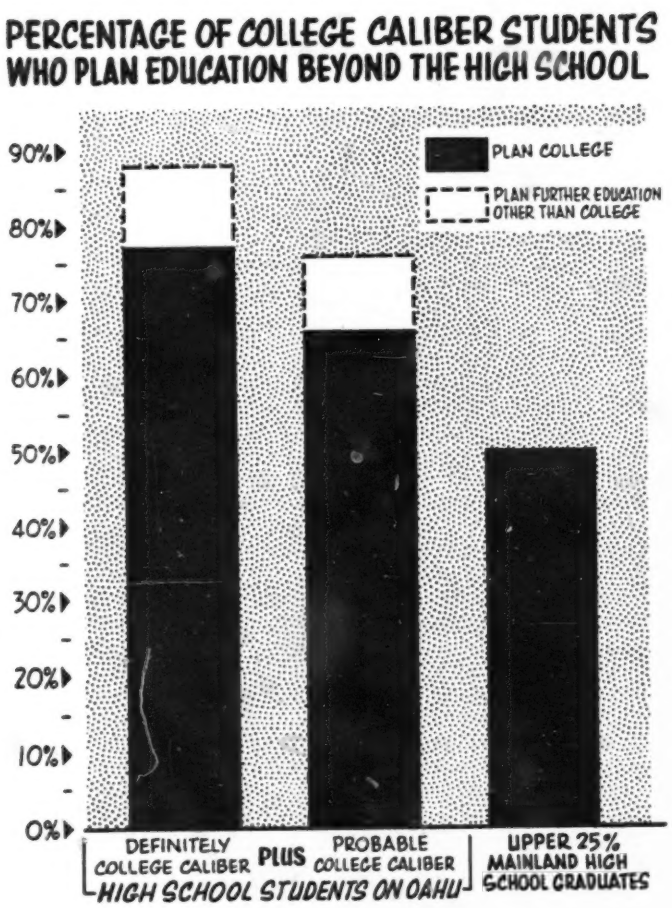
Similarly the college of General Studies of the University of Hawaii is concerned with high school graduates taking college credit courses which will be applied toward a degree and at the same time to a lesser extent with students who may or may not be high school graduates who are taking specific non-credit courses out of interest only. It can be said with regard to this aspect of education beyond the high school that the demand for it is likely to increase at a pace at least comparable to its growth in the past. The DPI Adult Education Program has experienced a nearly 300 percent growth from an enrollment of 2,900 in 1946 to one of 12,962 in 1957. Established in 1956, the College of General Studies had a Fall 1957 enrollment of 1,514 individuals for 2,386 course credits and 608 individuals registered for non-credit courses.

A survey of the practical requirements for an adequate program of education beyond the high school in the Territory during the next decade should include some reference to provisions for insuring use of these opportunities by potentially qualified students. In this regard the reader is asked to see Appendix III for a discussion of Student Testing, Counseling and Scholarships Related to Education Beyond the High School.

It has been proposed that there is a need in the Territory for "community colleges" to serve out-of-school youths, adults, and the aging group. A comprehensive community college program would include a variety of general education courses integrated with vocational-technical training for subprofessional occupations, short courses for employee upgrading and retraining necessitated by new developments in business and industry, special interest adult education courses, and perhaps undergraduate collegiate courses for transfer to an institution of higher education. Where they are in operation it is maintained that the transfer function of the community colleges frees the University from excessive demands for the provision of the total undergraduate program and enables it to expand its graduate and research training programs.

Determination of whether or not community colleges are in fact needed and economically reasonable for the Territory of Hawaii will not be attempted in this report. It is a question which should be resolved only after close study, with it as the central focus of study. It seems appropriate here to merely enumerate some of the basic considerations and alternatives which may be involved.

Community colleges will require facilities, staffs and operating budgets. The present technical schools and perhaps some secondary schools might well serve as the nucleus. Nonetheless some classroom area, additional staff and extensively extended library facilities would be required. Certainly if collegiate level work for transfer to the University or other collegiate institutions were included, staff of comparable training and ability, and comparable library facilities would be required to maintain the quality level of the collegiate institutions. These needs must be balanced against the needs of the existing collegiate institutions for facilities, staff, and operating budgets. Particularly is this true with the developing competition for qualified faculty and the crucial need for upgrading of college teacher salaries.



Excluding the college transfer functions, community colleges might provide essentially what is currently provided by the technical schools and the adult education programs of the Territory but in a more integrated and perhaps educationally sounder fashion. Exclusive of the college transfer function, this integration might be accomplished with existing facilities, staffs and operating budgets. The advisability of the transfer function being included in a community college program must be considered in relation to the University and other collegiate opportunities today. The University is not large; it does not provide the total possible curriculum — particularly in professional schools and in graduate training—because the size of the demand does not make it economically sound to do so. Professional schools and graduate schools are expensive. Reasonably large enrollments are required to justify their establishment. As yet the population of the Islands and student demands have not justified them. Heavy demands of increased enrollment will be made upon the University and the other growing private colleges within the next 10 years. The question is whether the pressure will be so great that relief by community colleges will be needed, or whether the increases will instead facilitate the growth of the existing institutions to their full potential. Certainly broader dispersement of education funds for similar types of training should not be undertaken at the jeopardy of existing programs.

Perhaps most basic to the determination of need for Community Colleges is the question of whether or not student demands are being or will be met adequately by existing opportunities — whether or not we have, or will have in the next decade a group of competent students who, without community colleges, would not attend school beyond the high school. This question cannot be satisfactorily answered until an extensive follow-up of high school graduates is made, correlating their activity with their ability. The only indications available at present are based on a very limited tabulation of the plans of capable high school graduates in 1957 and 1958 with their ability and stated reasons for not planning an education beyond the high school.

The responses of students to the Joint Committee for the Employment and Guidance of Youth survey questionnaire concerning post-graduation plans were tabulated. The graduating classes of four schools* s[illegible]ted by the DPI as being most typical Honolulu and rural Oahu high schools were included. In each case the school had divided the questionnaires into three broad categories: those students who were Definitely College Caliber, Probably College Caliber and Not College Caliber. Of the students in the Definitely College Caliber group 87 percent, and in the Probably College Caliber group 76 percent planned some education beyond the high school. Approximately 77 percent of the Definitely College Caliber group and 66 percent of the Probably College Caliber group had elected to undertake college or university study.

These figures of "intent" are considerably higher than the general United States estimate that ½ of the upper 25 percent of high school graduating classes do not enter college. Among the 114 in the Definitely College Caliber group there were only 16 who did not plan some kind of education

*James B. Castle High School, Kaimuki High School, Leilehua High School and McKinley High School.

immediately beyond the high school. Of these, seven planned to enter military service. Six of the seven entering military service planned to return to school after completion of their service training. None indicated financial reasons for not planning further education. In the Probably College Caliber group of 455 only 67 did not plan any immediate further education. Of these, 42 planned to enter military service. Seventeen of the 42 intended to return to school upon completion of their period in military service. Seven (or 1/5 of one percent of the group total) indicated that financial inability deterred them from planning further education. A different picture might be presented by the other islands where, with the exception of Hawaii, students are further from college training facilities.

Commonly, community colleges develop where a community unit, such as a county, feels its college-age group is of sufficient size to warrant a local college. Local funds are often matched by State or Federal funds. One alternative to the comprehensive community college which includes collegiate training might be extended and integrated technical and adult education programs along with the establishment of branches of the University. The University of Hawaii Regents have gone on record as favoring the establishment of a branch of the University whenever the Manoa campus is inaccessible to an area which has an adequate number of college age students desiring collegiate training locally. A recent Legislative Workshop on "Financing Higher Education"*, meeting in April 1958, recommended that: "A locality should be required to have a specific tax base and a specified number of potential students (not under 500) before it is allowed to establish a junior college."

*Sponsored by the Western Governors Conference, Western Regional Conference of the Council of State Governments, and WICHE. This conference was attended by a representative from both houses of the Territorial Legislature and by the Director of the Bureau of the Budget and met in Denver, Colorado.

Total Projected Cost of Education Beyond the High School in Public Funds — 1958-1968

A total projected cost in public funds which will be needed for education beyond the high school in the Territory of Hawaii over the next decade is presented in this concluding section. An indication is made of what the cost will mean in per cent of the citizen's income dollar and the territorial gross product. It is recognized that changing conditions such as substantial inflation, economic recession, war, or threat of war, etc., might radically alter the basic assumptions for these projections. (Costs are estimated on the basis of present money values. It is obvious that they can be influenced seriously upward or downward by continued inflation, or by deflation.)

The future welfare and progress of the Territory, however, will in large measure depend on how well it meets the challenge in providing opportunities for education beyond the high school. Present day competition demands maximum development of our intellectual and technical potential. New ideas, inventions and discoveries are essential. Adequate training is becoming more and more crucial to economic and social progress. If we are to keep up, one basic conclusion cannot be avoided —*the cost is going to be much greater in the future than at present!*

Soaring enrollments, society's demands, and increasing competition for good faculty leave no alternative to very substantial increases in public funds devoted to education beyond the high school. Some expectations of the future needs, therefore, are essential. The Committee believes the projected costs presented here are reasonable expectations. The ability of the Territory's population to underwrite an adequate program of further education without jeopardizing its competitive economic position has been considered. The Committee is convinced that the abilities and skills which a sound education program can develop will be effectively utilized within the economic pattern of the Territory, and will therefore benefit the Territory as a whole.

Because public funds are involved in the maintenance of the University of Hawaii and the technical, industrial and adult education programs of the DPI only, the final total projection includes only these aspects of education beyond the high school. This does not mean that the Committee overlooks the important responsibility of the private colleges, business schools and technical and industrial schools. Indeed it feels every proper means must be employed in the public interest to help and encourage the private institutions to assume as large a share of the approaching surge as possible.

The first essential in the public interest of the Territory and its citizens, however, is the maintenance of a first-rate University. It will bear the heaviest load of enrollment. It is also depended upon for a substantial amount of public service and productive research. These functions must be continued and expanded in addition to the increased instructional demands. The support and expansion of the Territorial trade and industrial schools is essential to filling the increasing trained labor demands.

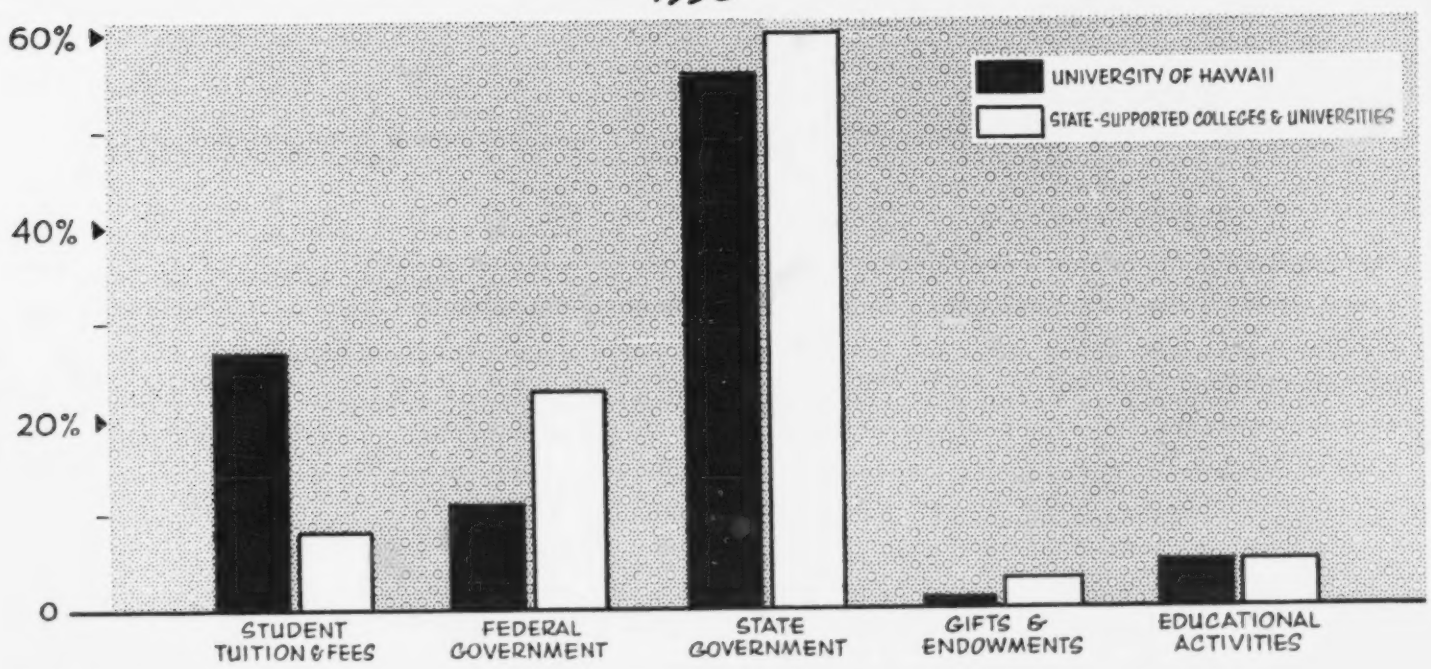
On the basis of the present cost per student at the University of Hawaii*, times the predicted enrollment for 1968, plus an allowance for doubled faculty salaries and minimal yearly increases in the sums devoted to organized activities related to educational departments, the agricultural experiment stations, the agricultural extension service, other extensions and public services, and general organized research, the projected operating budget for the University of Hawaii in 1968 is $16,300,000.† An additional minimum of $1,700,000 should be added for capital investment in that year. This

*Including administration and general resident instruction and related activities, library, operation and maintenance.

†See Appendix IV for a more detailed discussion of the computations and logic involved in reaching this figure.

SOURCES OF INCOME • UNIVERSITY OF HAWAII *Compared with State-supported Colleges and Universities on the Mainland*

1958



Source: Conference Report; "Issues in Financing Higher Education," April 1958 – Western Interstate Commission for Higher Education.

latter figure is based on an estimated $13,500,000 in capital improvements and investments needed over the four bienniums 1957-1965. An annual total of $14,000,000 required for the University of Hawaii by 1968 is thus a reasonably conservative estimate. It does not take into account the higher cost of living in the Islands, for example, and no cost of living increment has been added to the faculty salaries. It does not assume the addition of new colleges and areas of training which may boost the average cost per student of instruction. It is also conceivable, of course, that with greatly expanded enrollment and increased demands for trained personnel of specialized sorts that the addition of certain high cost schools may be deemed advisable. It does seem improbable, however, that population increases or other pressures in the next 10-year period will justify installation of professional colleges of law, dentistry, or medicine.

Assuming a doubled enrollment in the DPI trade and technical schools and the adult education program by 1968, annual operating budgets of approximately $2,000,000 and $1,000,000 respectively would be required. To this should be added approximately $1,000,000 for capital improvements in a year, making a total of $4,000,000.* Without embellishments then, by 1968 a grand total of $22,000,000 should be spent annually in the Territory of Hawaii on public education beyond the high school—the University of Hawaii and the DPI trade, industrial and adult education programs. Addition of the private colleges, trade and vocational school needs would increase the total annual Territorial investment in education beyond the high school significantly above this figure.

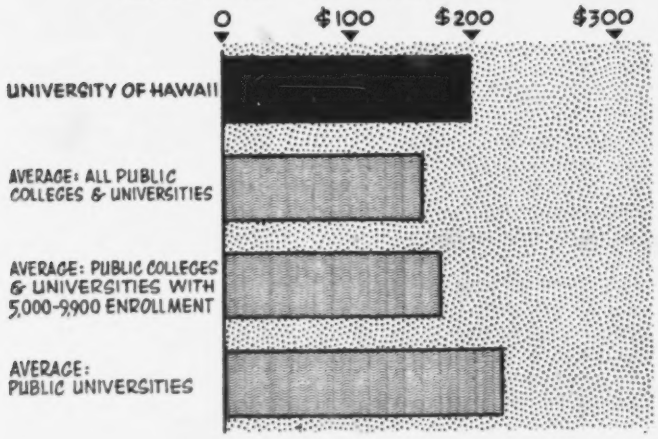
What percentage of this total sum will probably have to come from public Territorial funds in the form of legislative appropriations and capital investment allocations? The current sources of the University's income are shown in the graph above. Similarly, the sources of the DPI income for trade and industrial schools are shown on Page 27. Fifty-two percent of the DPI's adult education program's operating budget is appropriated funds.

The University of Hawaii's sources of income in 1954 are compared with state supported colleges and University members of WICHE (Western Interstate Commission for Higher Education) in the graph opposite. On the whole it receives more of its income from student tuition and fees and less from local appropriations, the federal government, and gifts and endowments than comparable institutions. For the purpose of our projection we have assumed that the present ratios will remain approximately the same.

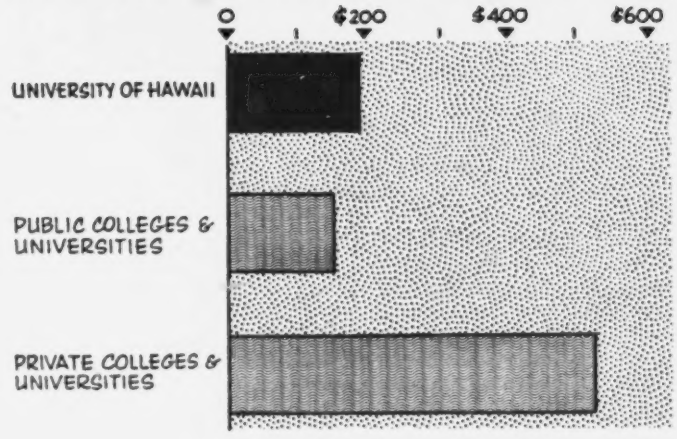
*See Appendiv IV for details of calculations.

TUITION & FEES* • 1957-1958

COST TO THE STUDENT



AVERAGE RESIDENT TUITION AND FEES

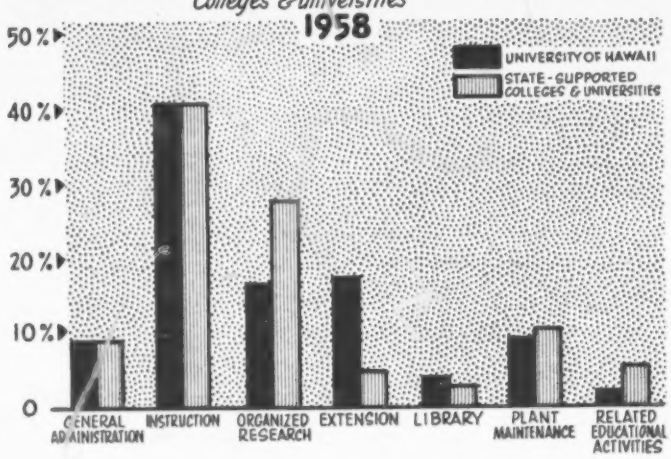


*University of Hawaii compared with Mainland Colleges and Universities.

Source: Data from University of Hawaii and Bul. No. 4, 1958, U.S. Dept. of Health, Education & Welfare.

The current tuition cost of the University of Hawaii for the student is considered to be at about maximum. The graph above, left, compares the University of Hawaii tuition and fee costs with the average of all public colleges and universities, the average for public colleges and universities of 5,000-9,000 enrollment and the average for public universities in 1957-58. The graph above, right compares it with public colleges and universities and with private colleges and universities. This lower graph illustrates what a very sharp rise in tuition is required for a relatively small increase in the total educational income. The percentage of federal appropriation to the University

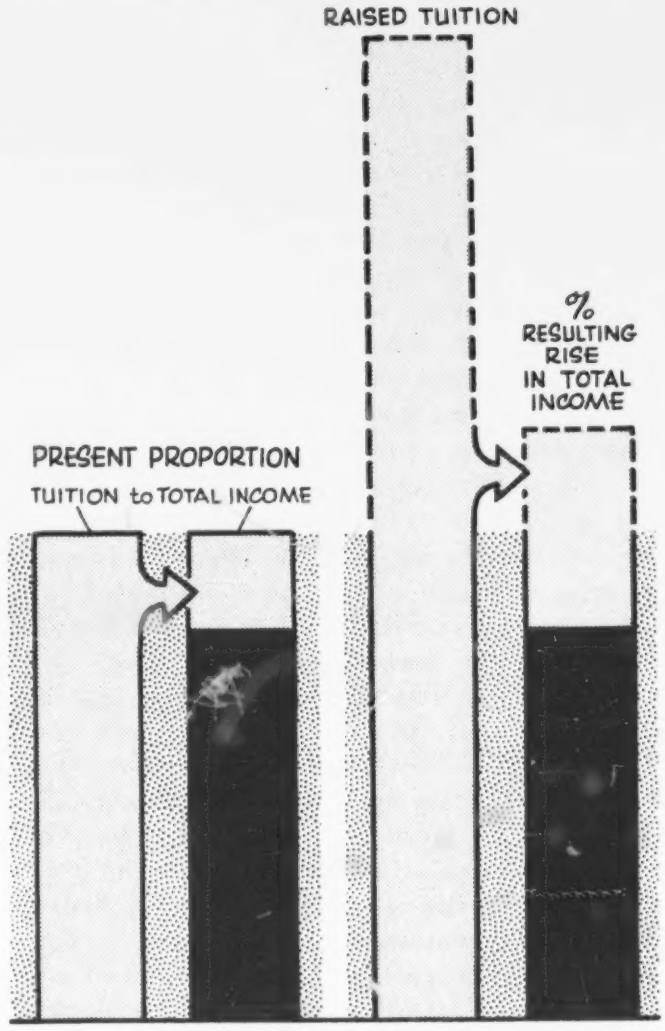
EXPENDITURES • *University of Hawaii compared with State-supported Colleges & Universities*



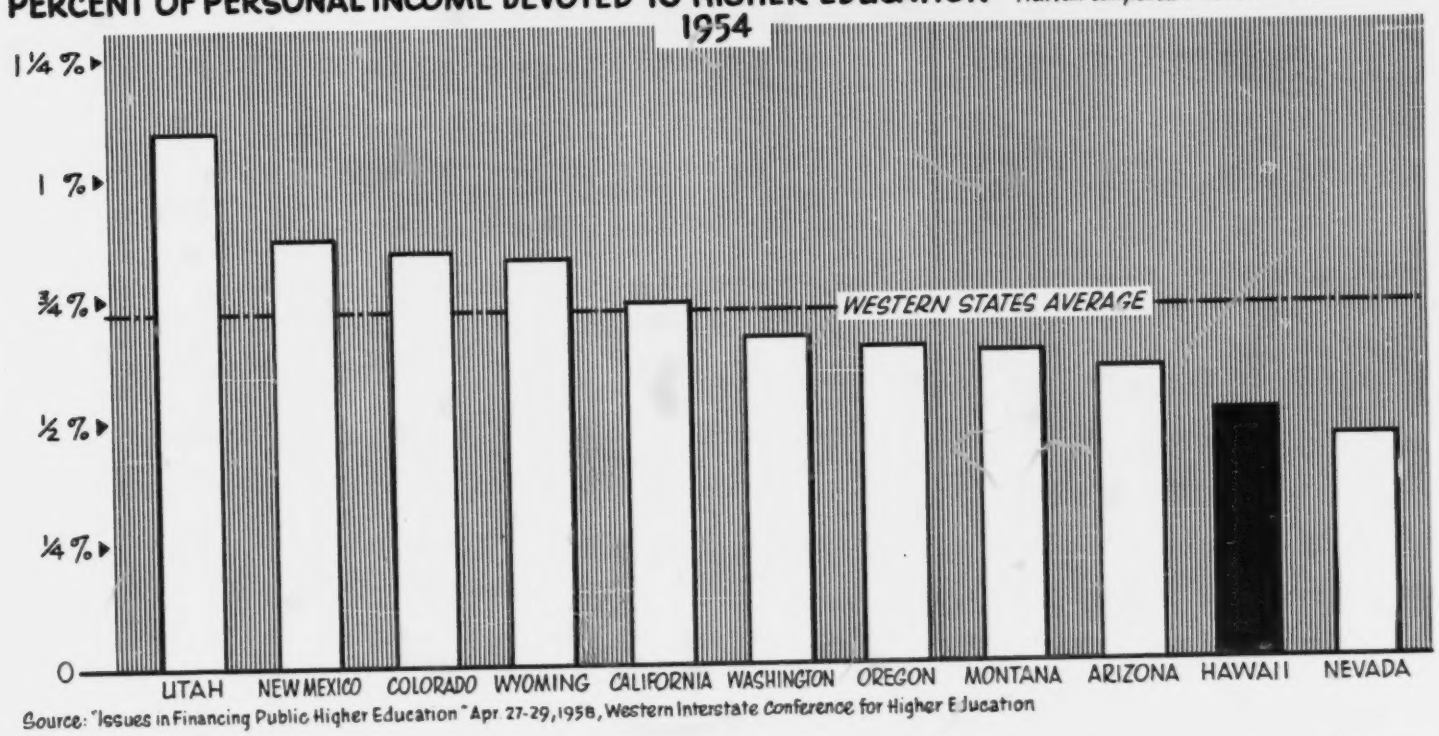
Graph shows **percentage relationships, not dollar volume.**

Source: Western Interstate Conference for Higher Education

HOW RAISING TUITION WOULD AFFECT TOTAL INCOME AT UNIVERSITY OF HAWAII



PERCENT OF PERSONAL INCOME DEVOTED TO HIGHER EDUCATION • *Hawaii compared with 10 Western States*



Source: "Issues in Financing Public Higher Education" Apr 27-29, 1958, Western Interstate Conference for Higher Education

has dropped slightly in the last few years but the percent from other fees, sales of services, etc., has increased slightly.

On the basis of adjustment in the current proportion of income derived from Territorial appropriations and allocations to maintain the present tuition rate and to represent the same items, the required public appropriations and allocations by the University of Hawaii and the DPI trade, industrial and adult education programs in 1968 will be nearly $15,300,000.* This represents an increase from 1958 to 1968 of 166 percent in Territorial appropriations for operating budgets and approximately the same capital improvement allocations.

What will this mean in 1968 in terms of percent of a Territorial citizen's income dollar and the Territorial gross product? In 1954 Hawaii's per capita expenditure for higher education was ½ of one percent. As illustrated in graph above this was among the lowest of 11 state members of WICHE. In the United States in 1953-54 six-tenths of one percent of the gross national product (total value of all goods and services produced during the year) was spent on higher education, or $15—$17 a year per capita. This, compared to $85.00 a year on tobacco and $87.00 per capita on a new automobile in the same year. In 1957 Hawaii's per capita expenditure for various types of education beyond the high school still equalled only approximately $13. The total estimated income from the liquor and tobacco tax in the Territory for the 1957-59 biennium was about $1½ million above the total University appropriated budget for the same period. These figures would indicate we can afford more for education beyond the high school.

The Territory devotes considerably less of its total personal income and less of its gross product to education beyond the high school than does the United States to higher education. Furthermore, the unit cost of the education it provides is less than the average for the United States. Our per capita income exceeds that of 24 states and approximates the national average. The growth in Hawaii's gross product has paralleled that of per capita income. In brief, the United States as a whole is not doing as well as it ought to in support of education beyond the high school. The Territory of Hawaii is doing even less well, although her capacities to do so are equivalent.

By 1968 a minimum of $23.50 per capita (based on our conservative estimate of need and projected population figures) must be devoted annually to education beyond the high school. By comparison, the projected per capita cost for the United States for 1970 is $34.00. Any less allocation of public funds to education beyond the high school will mean less than adequate opportunities for Hawaii's youth.

*See Appendix IV for computations.

APPENDIX I

THE COLLEGES AND UNIVERSITY OF THE TERRITORY OF HAWAII

UNIVERSITY OF HAWAII: The University of Hawaii is a young state university, being just 52 years old. It is located in lower Manoa Valley in Honolulu, on approximately 264 acres, and has a branch campus in Hilo occupying six buildings on 30 acres of land. Five undergraduate colleges: Arts & Science, Applied Science, Education, Business and Agriculture are included in the University. In addition, there is the College of General Studies and the Graduate School. The University confers the degrees of B.S., B.A., B.A. in Art, B. Ed., B.B.A., M.A., M.B.A., M. Ed., M.A. in Art, M.S.*, Master of Social Work, and Doctor of Philosophy in those fields in which the University can offer thorough advanced training.

The University does not offer graduate study in all disciplines, nor does it maintain a number of the high cost professional schools including those of architecture, medicine, veterinary medicine, dentistry, and law. The aquarium, the Legislative Reference Bureau, the Agricultural Experiment Station and the Agricultural Extension Division—all administered by the University—are more community than student centered.

The instructional area of the University includes 351,458 square feet, 10 percent (36,708 square feet) of which consists of temporary barrack type buildings in varying states of disrepair. Upon completion of the approved buildings for which funds have been allocated, the instructional area will have increased by 62,300 square feet. At the same time, however, the use of at least 10,280 square feet in temporary buildings beyond repair (engineering and music buildings) is expected to be eliminated, leaving a net gain in instructional area of approximately 52,000 square feet.

The 1959-61 Biennium estimate of needs for the University of Hawaii includes a president's residence, a classroom building, renovation of certain existing facilities, three buildings to replace temporaries, a cafeteria, a maintenance building, a high school cafetorium, a women's dormitory, off-street parking and improvement of campus lighting, and seven buildings for various aspects of agricultural instruction and research. By the Biennium 1961-63 it is estimated that there will be a need for another classroom building, additional roads, drainage and utilities, a men's dormitory, additional off-street parking, a maintenance storeroom, tennis and volleyball courts, and a Ground-keeper's cottage. It is expected the Biennium 1963-65 will see a need for still another classroom building, an addition to the music building, swimming pool, drainage and utilities and off-street parking.

In the fall of 1957, approximately 91 per cent of the student body of the University of Hawaii came from the Hawaiian Islands. About 31 percent of this number were from rural Oahu and the Outer Islands. Six percent (353) of the students came from the Mainland, representing 43 different states. The remaining 3 percent (153) of the student body came from more than 17 foreign countries.

Tuition and general fees for full time students are $95.00 a semester, or $190.00 a year. As of June 30, 1956, the total plant assets of the University of Hawaii were listed as $13,415,535. This calculation, however, gives a nominal valuation to the land occupied by the University and therefore has only hypothetical meaning.

PRIVATE LIBERAL ARTS COLLEGES: The three private liberal arts colleges of the Territory include Chaminade College, Jackson College and Honolulu Christian College. They are all located in the city of Honolulu. In addition there are two junior colleges, Church College of Hawaii at Laie, Oahu, and Maunaolu Community College at Paia, Maui.

---

*B.S.,—Bachelor of Science, B.A.—Bachelor of Arts, B.A. in Art—Bachelor of Fine Arts, B. Ed.—Bachelor of Education, B.B.A.—Bachelor of Business Administration, M.A.—Master of Arts, M.B.A.—Master of Business Administration, M.Ed.—Master of Education, M.A. in Art—Master of Fine Arts, M.S.—Master of Science.

Chaminade College was begun in September 1955 as St. Louis Junior College. It enrolled men only. It was expanded to a four-year coeducational institution under its present name in 1957. It is maintained by the Catholic Church, under the care of the Marianists, but enrolls students of all faiths. Located in the Kaimuki area of Honolulu on several acres of land with St. Louis High School, it occupies one principal building and uses two barracks, a new gymnasium, a dining hall shared with St. Louis High School and a faculty residence for the Marianists on the staff. It maintains a Library of 7,000 select volumes, limited to the majors offered by the College. The college charges $190.00 per semester, or $380.00 a year tuition.

Most of the students of Chaminade College are from the Hawaiian Islands. About 40 male students of rural Oahu and outside islands reside on campus.

Chaminade College confers the B.A., the B.S. and the B.S. in Ed. It does not offer graduate work. It does offer evening business courses, general studies adult education courses, and a Summer Advanced Placement Program for high school seniors.

The estimated replacement value of the Chaminade College plant is $1,756,315.

Jackson College was chartered by the Territorial Government of Hawaii in April, 1948. It is owned and operated by the Hawaii Baptist Foundation. Located on 1-1/10 acres of land in Manoa Valley, it occupies two buildings with an aggregate instructional area of approximately 8,000 square feet. It possesses a library of about 25,000 bound volumes.

The B.A. and M.A. degrees are conferred by Jackson College. In addition to the day-time college, Jackson College conducts an evening program leading to a degree. Of the 318 evening college students, about 90 percent are military personnel. About 80 percent of the day-time college students are from the islands. There are no campus facilities for resident students.

Tuition and general fees for a full-time student average $160.00 a semester, or $320.00 a year. The plant assets of Jackson College approximate $81,664.00.

Honolulu Christian College was opened in 1953 on the Nuuanu Avenue campus which formerly housed Iolani School. At present the college is occupying quarters at 1313 Kinau St. It does not maintain dormitory facilities for resident students.

Honolulu Christian College confers the B.A. and B.S. degrees, but is used to a large extent as a junior college with at least one-half of its students transferring to other colleges or universities after one or two years. Tuition and general fees are $135.00 a semester, or $270.00 a year.

The Church College of Hawaii was opened in September of 1955 at Laie, Oahu, by the Church of Jesus Christ of Latter-day Saints. In mid 1958, the school will occupy a completely new campus on several acres of land. The new campus includes a large central administration and classroom building, library, industrial education building, gymnasium, swimming pool, athletic field, two dormitories, an apartment house and a cafeteria. A four-year college for a capacity enrollment of 1,200 has been planned in the construction of the new campus.

About 95 percent of the 1956-1957 class of the Church College of Hawaii were island students. About one-half of the student body are residents at the college.

The college confers the A.A. and A.S. degrees.* It also confers the Diploma (Certificate of Completion) for terminal programs in the Division of Agriculture and Technology and the Division of Business.

Tuition and general fees are $90.00 per year. The plant assets of the Church College of Hawaii are well in excess of $3,500,000.†

*A.A.—Associate of Arts, A.S.—Associate of Science.
†Mission labor was used almost exclusively in construction.

Maunaolu College, located at Paia, Maui, was opened as a co-educational institution in the fall of 1950 by the Hawaiian Evangelical Association. It had originally been the East Maui Female Seminary for Hawaiian girls. The principal administration-general classroom building with the other buildings provides facilities for a maximum enrollment of 120 students. The student body is made up of students from the Hawaiian Islands, Philippines, Pacific Trust Territories, Japan, Korea and the Mainland. About half of the students reside on campus.

Maunaolu College grants an A.A. degree, and provides music, art and business courses in addition. The tuition is $100.00 a quarter, or $300.00 a year. The replacement value of Maunaolu College is estimated at $300,000.00.

APPENDIX II

HAWAII'S SCHOOLS FOR EDUCATION BEYOND THE HIGH SCHOOL OTHER THAN COLLEGE

The variety of schools in the Territory offering education beyond the high school involves anywhere from 2 months to 3 years of training. The Art School of the Academy of Arts offers a full-time study program of 2 semesters of 4 months each in a year, ten session classes and evening classes. The offerings include varied drawing and painting, design and commercial art, sculpture and history of art classes.

The two beauty schools operate full-time year long courses involving 1,800 hours of study. Trained in cosmetology, hairdressing, beauty culture and related subjects the graduates may be licensed as operators upon examination.

The several private business and stenographic schools offer a variety of stenographic, secretarial, clerical filing, accounting and business administration courses. With the exception of the Hilo Commercial College, their instruction year is divided into 5 terms of 9 weeks each. The various course offerings involve 5 to 8 terms for completion. Evening offerings are similar but are organized on an 11-week term basis. Hilo Commercial College is set up on a 3 quarter a year basis with the various course offerings necessitating from 5 to 6 quarters for completion.

Queen's Hospital School of Nursing and St. Francis Hospital School of Nursing offer a 3-year course in professional nursing. A diploma is conferred at the end of three years and graduates are eligible to take examinations for professional nurse licensure.

The five technical schools of the DPI offer 24 different areas of study.* The majority are two-year programs involving 2,700 clock hours of instruction; the exceptions include Practical Nursing and Hotel and Restaurant Training. Both day and evening courses are available. The private technical and trade schools provide courses in electricity, radio and TV servicing, industrial electronics, automotive servicing and gas and diesel mechanics. Evening classes offer the same curriculum but necessitate longer terms.

---

*Aircraft Mechanics, Auto Body Repair and Painting, Auto Mechanics, Baking, Business Education, Cafeteria Management, Carpentry, Commercial Sewing, Cosmetology, Diesel Mechanics, Drafting-Building Trades, Electricity, Electronics, Engineering Aid, Hotel and Restaurant Cooking, Hotel Room Maid Training, Hotel Pantry Training, Machine Shop, Practical Nursing, Radio and Television, Refrigeration and Air Conditioning, Sheet Metal, Sheet Metal and Welding, Waiter and Waitress Training.

APPENDIX III

TESTING, COUNSELING AND SCHOLARSHIPS RELATED TO EDUCATION BEYOND THE HIGH SCHOOL

Nationally it has been estimated that probably one-half of the top 30 percent of the Nation's high school graduates do not go on to college and that between 60,000 to 100,000 highly able secondary school graduates with aptitude and interest for college fail to continue their education for financial reasons. A study by the Educational Testing Service of Princeton, N.J., in 1955 found that four-fifths of the superior high school seniors who **originally** were not interested in continuing their education would probably go to college if they had scholarships. Lack of interest and motivation are other contributing factors to this serious waste of intellectual resources.

Testing for aptitudes and abilities is valuable in getting students into educational activities and careers best suited to them. With test results is needed skilled counseling to help the student select sources of study and careers best suited to his real interests and abilities. But testing and skilled counseling are meaningless if a talented student cannot get the money for the higher education he is encouraged to obtain.

Most individuals need help in identifying their talents and in obtaining information about training and careers. It is in these fields that sound testing and guidance programs are needed. The President's Committee on Education Beyond the High School has identified some of the blocks to further education for high school graduates as:

1. Lack of information regarding careers in time to plan for them.
2. Lack of self-knowledge of individual capacities.
3. Lack of inspiration at home and in school.
4. Failure of the student to see the relationship of further schooling to his career needs or to the realization of his full potential.
5. Negative family attitudes.
6. Labor market conditions which make it attractive to enter the labor force early.
7. Lack of facilities for post-high school education and training in the local community.
8. Lack of personal or family funds for tuition and support.
9. Inability or unwillingness of the family to give up the earning capacity of the youth.
10. In some cases, discriminatory practices in admission, after admission, and in employment after graduation; in some cases, misconceptions which lead to student discouragement.
11. Breaks in the educational continuum (military service, marriage, leaving school for a job, etc.), without ready opportunities to reenter school, even though the individual later realizes that additional education would be desirable.

It has not been a function of this Committee to evaluate the testing, guidance and scholarship programs of the Territorial schools beyond the high school. It can only indicate that the secondary schools do have guidance programs and those of the DPI were surveyed by the Stanford Survey Staff for their report: **Organization and Administration of the Public Schools, Territory of Hawaii, in 1957.** The Survey Staff reported that the public Territorial secondary schools have made good beginnings in the development of guidance services. Fairly extensive recommendations for their improvement and expansion, however, were included in the report. Similarly, the University of Hawaii and the various colleges of the Territory provide varying degrees of guidance and counseling services. Generally, it may be observed that almost without exception the effectiveness of the services could be improved—in most instances with the addition of personnel and improved salaries.

The available scholarships in the Territory of Hawaii for education beyond the high school are not extensive. Each year the University of Hawaii provides 24 Territorial tuition scholarships for entering Freshmen (two scholarships to residents of each senatorial district in Hawaii). The recipient may hold the scholarship for four years, provided he maintains a satisfactory record of work on the campus. A total of 96 such scholarships, therefore, are usually granted annually. There are a few University scholarships supported by endowment funds, some for foreign students, a few specialized grants, and a few individual and private organization-administered scholarships.

Some of the private colleges provide full and partial tuition scholarships. Honolulu Christian College, for example, grants 6 one-year tuition scholarships, Church College of Hawaii some 70 full and partial tuition scholarships. Jackson College grants service personnel a reduction in their tuition fee. All of the colleges have provisions for helping students through work scholarships or grants-in-aid.

Among the other types of institutions there are almost no scholarship possibilities. The Art School of the Honolulu Academy of Arts has two contest scholarships, one to two other tuition scholarships, and one or two work scholarships. The alumni, civic and commercial groups provide a few scholarships for the business schools and the schools of nursing.

On the whole the scholarship assistance available to students in the Islands suffers from the same handicaps common to the Mainland. Students often do not, or cannot, take full advantage of available funds because there are (a) tight restrictive clauses; (b) too few persons have a timely knowledge of the existence of student assistance funds; (c) high interest rates and other restrictions attached to many loans; (d) scholarships, too small to be of significant assistance, which do not attract applicants; and (e) too often a lack of initiative or imagination in the administration of student assistance programs. Too often student financial assistance is obtained from an institution's operating funds in the form of tuition and fees. Often these funds are more urgently needed for improved faculty salaries. Thus the teachers indirectly become the unrecorded donors of the scholarships.

The one conclusion of the Committee with respect to this topic is that increased support of scholarship funds to several times the present amount and number should be forthcoming.

APPENDIX IV

SUMMARY OF CALCULATIONS*

FOR THE UNIVERSITY OF HAWAII:

Estimated General and Instructional Budget for 1968 (Excluding Summer School)		$13,300,000
Based on current educational and general cost/FTSE of $709.41		
With doubled faculty salaries educational and general cost/FTSE of $1,135		
For estimated 11,704 enrollment, 1968 (including Hilo Branch and College of General Studies).		
Plus: 5 percent yearly increase in costs of:		
Organized Activities Related to Educational Departments	400,000	
Agricultural Experiment Station	1,200,000	
Agricultural Extension Service	1,000,000	
Various Extension and Public Services	200,000	
General Organized Research Item	200,000	
		$ 3,000,000
PROJECTED OPERATING BUDGET NEEDED ANNUALLY BY 1968		$16,300,000
Annual Capital Improvements Required 1968		1,700,000
Based on equal yearly distribution of requested items for Bienniums 1957-1959, 1959-1961, 1961-1963 and 1963-1965, totaling $13,509,100.		
TOTAL PROJECTED ANNUAL NEED OF UNIVERSITY OF HAWAII, 1968		**$18,000,000**

*It must be emphasized that the calculations herein include only the University of Hawaii, the DPI Trade and Industrial Schools and the DPI Adult Education Programs as the only institutions for education beyond the high school involving direct Territorial Legislative appropriation of public funds. The inclusion of the private institutions would significantly augment the total.

FOR THE DPI TRADE AND INDUSTRIAL SCHOOLS AND ADULT EDUCATION PROGRAM:

Estimated Operating Budget for 1968 for Trade and Industrial Schools		$2,000,000
Based on current cost per student of $104		
With doubled faculty salaries cost per student of $172.86		
For estimated enrollment of 11,600 in 1968.		
Plus: annual capital improvements required annually, 1968		1,000,000
Based on estimated need over next 3 bienniums totaling $4,200,000		
Estimated Operating Budget for 1968		1,000,000
For adult education program		
Based on current cost per student of $19.29		
With doubled faculty salaries $38.58		
For estimated enrollment of 26,000 in 1968		
		$4,000,000

TOTAL ANNUAL BUDGETARY NEED FOR PUBLIC EDUCATION BEYOND THE HIGH SCHOOL, 1968.

By the University of Hawaii	$18,000,000
By DPI Trade and Industrial Schools	3,000,000
By DPI Adult Education	1,000,000
	$22,000,000

PUBLIC TERRITORIAL FUNDS NEEDED TO MEET BUDGET DEMANDS OF UNIVERSITY OF HAWAII, DPI TRADE AND INDUSTRIAL SCHOOLS, AND ADULT EDUCATION PROGRAMS, 1968.

For:	
University of Hawaii	$12,300,000
(Based on 65% of estimated operating budget, plus capital improvements allotment required).	
DPI Trade and Industrial Schools	2,500,000
(Based on 86% of estimated operating budget, plus capital improvement allotment).	
DPI Adult Education	500,000
(Based on 52% of estimated operating budget).	
TOTAL IN PUBLIC SUPPORT	**$15,300,000**

It is the purpose of this report to place before the community an understanding of the prospective needs concerning Education Beyond the High School in Hawaii.

Governor Quinn has asked the group of leading citizens listed below to form a **Council on Education Beyond the High School** and to become (both as individuals and as a council) an active medium for bringing to the people of Hawaii the facts concerning these prospective needs.

This will be a basic community problem in Hawaii during the years immediately ahead. It is hoped that under the leadership of the council these educational needs will be seriously studied and thoroughly discussed by all interested groups throughout the Territory to the end that sound policies will support a strong educational program for the young people of Hawaii.

COUNCIL ON EDUCATION BEYOND THE HIGH SCHOOL

Henry S. Aurand
Lt. General, U. S. A. (Ret.)

Filemon Battad

Dr. William N. Bergin
President, Hawaii Medical Association

Dr. Roy E. Brown
Tax Foundation of Hawaii

Dr. Hung Wo Ching

Dr. Dai Ho Chun
International Cooperation Center of Hawaii

Mrs. Gerald R. Corbett

Dr. Hubert V. Everly
University of Hawaii

Charles J. Fern
Garden Island Publishing Co., Ltd.

John T. Ferreira, Jr.
President, Hawaii Education Association
Principal, Kaimuki Intermediate School

Y. Baron Goto
Director, Hawaii Agricultural Extension Service
University of Hawaii

Bartley M. Harloe
Col. U. S. A. (Ret.), Professor, Engineering Department, University of Hawaii

Mrs. Robert L. Hind

Raymond Y. C. Ho

Dr. F. S. Kagihara
President, Hawaii Territorial Dental Society

Mrs. George Kellerman
President, American Association of University Women

Bert T. Kobayashi
President, Bar Association of Hawaii

William J. Lederer
Captain, U. S. N. (Ret.)

Dr. K. C. Leebrick
President, Maunaolu College

Father Robert R. Mackey
President, Chaminade College

Dr. Clarence Masumotoya
Chairman, P. T. A. College Subcommittee
Principal, Pearl City Elementary School

Mrs. Chuck Mau

Ben Norris
Professor, Art Department, University of Hawaii

John Nothom
Principal, Honolulu Technical School

Kwan Doo Park

Richard Takasaki
Bureau of the Budget, Territory of Hawaii

Mrs. Juliette Wentworth

Dean Richard T. Wootton
Acting President, Church College of Hawaii

Mrs. Shizue Yoshina
President, Hawaii Congress of Parents and Teachers